

CIO

YOUR JOB AS A PARADOX

Resolving contradictions in the CIO role 56

NO MORE CONSULTANTS?

Crafting your own outsourcing deal 23

HAND OVER CONTROL

Why customers should own their data 15

DON'T GET FOOLED AGAIN

The newest phishing scams 24

Acting on Opportunity

Our annual **State of the CIO** research reveals a sharper commercial focus as IT reinvents business alignment 38

BY KIM S. NASH



PLUS, ALL THE DATA

Your **agenda**, your **budget**,
how you compare to your
peers 29



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IP TELEPHONY is one of the most powerful tools in business today, enabling users to communicate, collaborate and innovate like never before. But too often, the benefits of IP telephony are overshadowed by the complexity and limitations of legacy architectures.

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ShoreTel completely eliminates this complexity with its sophisticated, feature-rich ShoreTel® IP phone system. The unique, easy-to-use, all-in-one design integrates unified communications and contact center capabilities with the IP phone system. It is also purpose-built for IP, which inherently simplifies deployment, administration and use, alleviating the burden that IP phones traditionally place on IT organizations. For instance, IT staff can manage the system and perform administrative tasks from anywhere in the network via an intuitive Web-based interface.

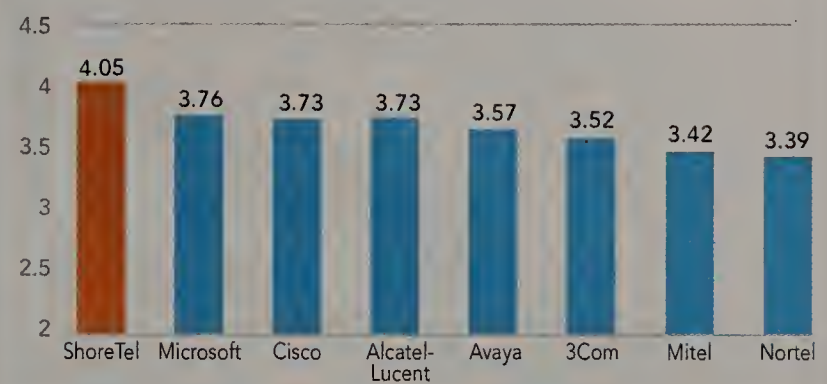
UNPARALLELED VALUE

In recognition of the power of this simplified and cost-effective approach, ShoreTel's IP communications system was recently named the winner for the sixth straight year of Nemertes Research's prestigious PilotHouse Award for IP Telephony. The award, which is uniquely based on feedback from business customers, puts ShoreTel at the head of the pack, beating out every competitor in every category, including value, customer service, sophistication of technology, management tools, ease of implementation and troubleshooting—all key areas that IT depends on for a successful voice-over-IP experience.

"The common thread among participants that favor ShoreTel is its value. Low prices, a broad set of features, scalability, strong customer service, and relatively less complicated deployment and troubleshooting requirements all contribute to ShoreTel's win," writes Irwin Lazar, vice president of Communications Research at Nemertes. ShoreTel ranked above the field of competitors, which includes Microsoft, Cisco, Alcatel-Lucent, Avaya, 3Com, Mitel and Nortel.

In its report, Nemertes quoted a director of telecom for a U.S. engineering firm who was excited about the powerful combination of

IP Telephony: All Vendors, Overall Scores



Source: 2009 Nemertes Research

IP telephony infrastructure, applications, management and security that ShoreTel provides. "We picked ShoreTel because of its enthusiastic VARs, low cost, wide support of SIP-trunking service providers, unified communications features and the scalability to grow as we grow," the director said.

SEAMLESS INTEGRATION

The heart of ShoreTel's system is a highly reliable and intelligent switch-based architecture that can unify communications across multiple locations, supporting IP phones, analog devices and a variety of trunk interfaces. This open architecture allows IT teams to easily preserve their investment in legacy equipment as well.

The open ecosystem also enables organizations to easily scale deployments and seamlessly integrate business applications. Users can gain instant access to business-critical applications such as Microsoft Dynamics CRM, NetSuite and Salesforce.com from within the ShoreTel® Call Manager dashboard.

Businesses of all sizes, including the San Francisco Giants and the Washington State Employees Credit Union, are now able to avoid complexity and realize the promise and simplicity of IP telephony using ShoreTel's IP communications system.

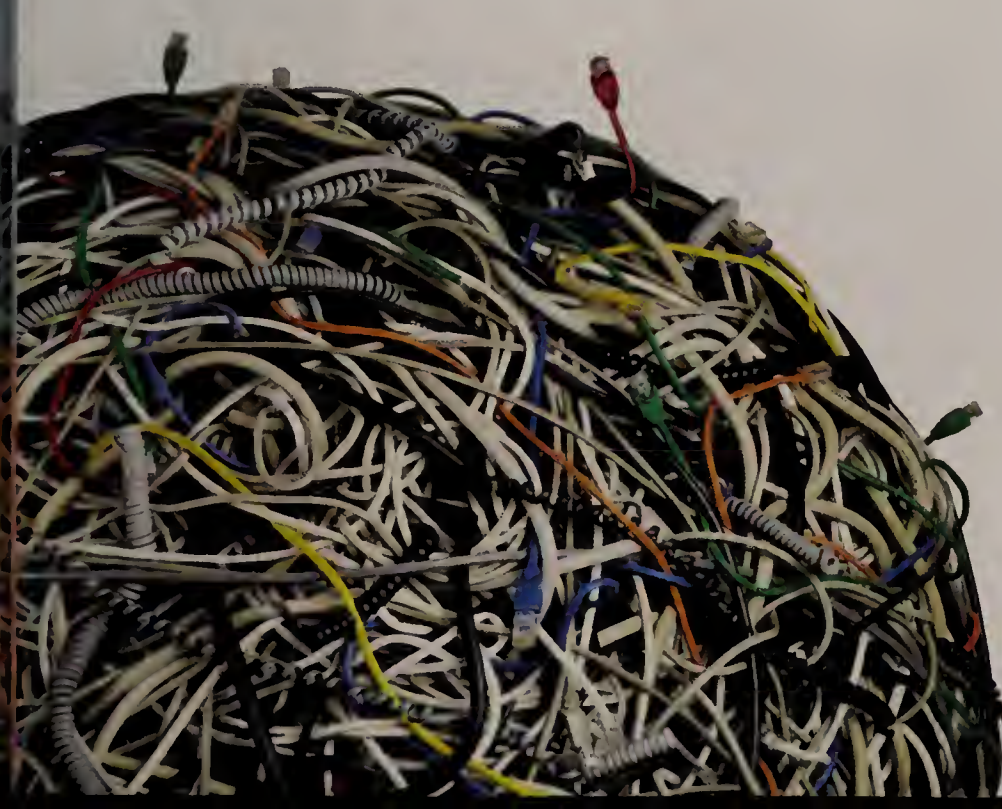
"We used to be No. 1 across Major League Baseball in terms of telecom costs," says Bill Schlough, CIO for the San Francisco Giants. "Those expenses were coming from our landlines. It was the simplicity and reliability of the [VoIP] architecture that ShoreTel had...compared to others that would require multiple racks and multiple points of failure that was the differentiator."

Learn more about ShoreTel's IP phone system at <http://shoretel.com/untangle>

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Start

From the Editor in Chief **4**
Chatter **4**
From the CEO **8**
Connecting Points **10**
What We're Reading **12**



4



15

Grow

INNOVATION & BUSINESS VALUE

Letting customers control their data **15**
The secret to project success **16**
Putting business processes before IT **18**
Clayton Christensen on what CIOs get wrong **20**

Run

LEADERSHIP & OPERATIONAL EXCELLENCE

Do-it-yourself outsourcing negotiations **23**
Five social engineering tricks to beware **24**
The hidden costs of free code **26**



23



52

Connect

PEER ADVICE

How CIOs can communicate IT value **52**
Becoming an externally-focused leader **54**
Is IT set up to fail? Time to fight back **56**
Whirlpool CIO's advice for business recovery **60**

Finish

Better ski maps through IT **64**
Index **62**



64

The State of the CIO **2010**

Acting on Opportunity **38**

COVER STORY Our annual State of the CIO research reveals a sharper commercial focus for IT leaders

BY KIM S. NASH

All That Data **29**

SURVEY Your agenda, your budget, how you compare to your peers



Darden Restaurants CIO **Patti Reilly White** finds being visible is essential to understanding business needs.



FROM THE
EDITOR IN CHIEF

start

Alignment 2010

I've taken to calling it "The Scarlet A," this persistent quest for IT/business alignment that brands senior IT leaders everywhere. My smart-alecky phrase cracks a few smiles of weary recognition from CIO audiences, but nobody argues against IT initiatives lining up with business goals.

But as our annual State of the CIO survey discovered, IT's commercial focus is fast becoming the sharper edge of alignment (see "Acting on Opportunity," Page 38). Also new in this issue is "Connecting Points" (see Page 10) a collection of peer advice from our workshops.

Chevron CIO and President of IT Louie Ehrlich points out that last year's global recession accelerated the drive to use IT in "building and maintaining an understanding of the commercial and customer side of the business."

The truly aligned companies of the future, in other words, will be those where every division, every department, every manager and every employee is working toward the goal of winning over customers. And guess what lives at the very center of the customer experience?

Just listen to CIO Drew Martin of Sony Electronics: "In so many of the products offered now, the differentiating component is the IT capability." Certain Sony TVs, for example, now stream movies wirelessly thanks to products IT helped create. "You have to have an awareness of where your business is trying to go," Martin says.

Standing out in our survey was the finding that more than three times the IT leaders identified "seizing commercial opportunities" as a personal leadership competency (22 percent this year versus 6 percent last year). Some 30 percent of the 594 IT leaders we surveyed identified "meeting or beating business goals" as a critical core competency, and "external customer focus" popped up as another vital skill for twice as many respondents this year.

While still far from the majority, some CIOs are running businesses alongside oversight of internal IT. Like CIO Anna Ewing at the Nasdaq stock exchange, who runs the division that sells Nasdaq's technology to financial exchanges around the world. A CIO's ability to spot new business opportunities comes from thinking like a CEO, Ewing believes.

This all points to what our CIO Executive Council calls "The Future-State CIO," a top exec primarily focused on broadening beyond operational excellence into customer impact and business strategy. As Ehrlich aptly puts it: "Let's create a future where the CIO not only can play a strategic external/commercial role, but is called upon by CEOs to do just that." Alignment 2010 could be a whole new game for CIOs, at long last!

Maryfran Johnson, Editor in Chief, CIO Magazine & Events
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CHATTER

Are We There Yet?

With a new decade, **is it reasonable to assume IT management is getting easier?** CIO.com's Senior Editor Thomas Wailgum doesn't think so: "The ever-expanding technological jungle that IT ecosystems now resemble seems harder and more expensive to manage than it did a decade ago." And yet **the tools are improving.** A recent Forrester survey revealed IT's top priority for 2009 was "modernizing key legacy applications." Wailgum is fairly certain **your CEO is still not convinced much has changed.** www.cio.com/article/509349

IT Staffers Holding Out?

It should be reasonable to assume **unemployed IT professionals are accepting lower salaries than before the recession.** But CIO.com's Senior Editor Meridith Levinson says it may be harder than you think to fill an open position when candidates aren't willing to settle for steep cuts from what they once earned. **Will you wait for the perfect candidate at the perfect price?** advice.cio.com/node/9091

Microsoft King, For Now

Will Microsoft's monopoly on PC operating systems last? After Gartner announced a 10.7% year-over-year decline in PC selling prices, **Senior Writer Shane O'Neill questions how hardware makers are impacted.** With no incentive for Microsoft to lower Windows 7 license prices, PC makers may be forced to look at options such as Google's Chrome. For now, consultant Tim Bajarin says, **"Microsoft controls the OS."** www.cio.com/article/509556

CORRECTION

In the story "Follow the Money," (Dec. 1, 2009) we misstated Starbucks' 2009 revenue. The correct figure is \$9.8 billion. We regret the error.

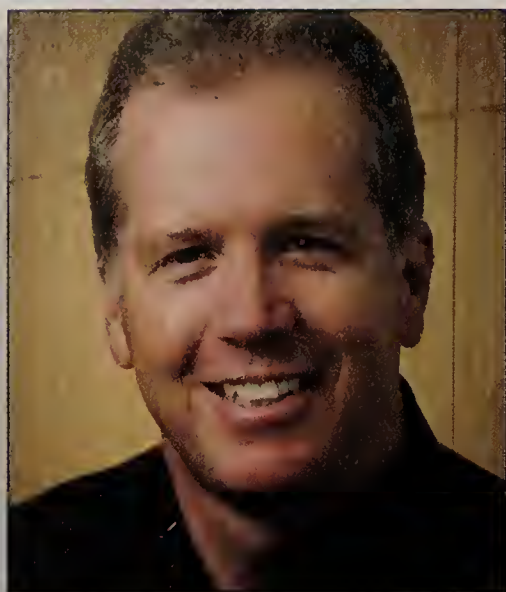
Compiled by Assistant Editor Simone Levien. Have a comment about a story in this issue of CIO? Go to www.cio.com/magazine/20100101 or write to letters@cio.com.

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Counting Up End User Benefits of Desktop Virtualization

'Game-changer' solution gives users the control they want.

Gordon Payne, SVP, CITRIX SYSTEMS, INC.

Payne is the senior vice president and general manager of the Desktop Division for Citrix, a \$1.6B leader in virtualization, networking and cloud computing. A seasoned industry veteran in IT infrastructure, he provides product leadership with a focus on identifying new market opportunities and creating desktop virtualization product solutions for Citrix customers and partners.

With all the attention IT is paying to desktop virtualization these days, you may well expect end users to ask, "What's in it for us?" The answer is "plenty," according to Gordon Payne, senior vice president of the Delivery Systems Division at Citrix Systems, Inc. Among the benefits are better performance, self-service and improved productivity.

How does desktop virtualization improve the performance of users' desktop and laptop machines?

The best experience you have with your PC is generally on day 1, when you take it out of the box. As you use the machine—loading software, changing settings and the like—its performance starts to degrade. About two years in, you're getting frustrated and want to reimagine it or get a new machine. It's a different story with desktop virtualization. Every single time you log into a desktop session, you're getting a brand-new operating system and the most current versions of your applications, all with the latest patches and updates. It's like a day 1 experience every time you start your desktop.

What are some important considerations in ensuring that users have a good experience with desktop virtualization?

When you're delivering desktops and applications across a network, providing a high-definition experience is about protocol efficiency. That's something Citrix has been focused on throughout its 20-year history, and our Citrix HDX technology is the latest example. It's fairly

simple to deliver a great user experience with 10 Mbps of bandwidth per user. But the real challenge is to deliver that experience with a small amount of bandwidth, because if you're delivering to 50,000, 100,000 or 200,000 users, that's what you'll need to do. Or when your users are on the road, whether across the country with a 200-millisecond delay or on an airplane using WiFi, companies need to deliver that great user experience with very low bandwidth, and that's what HDX is all about.

Can CIOs build a desktop virtualization business case based on improving the user experience?

CIOs can build a business case based mainly on increased productivity in two main areas. First, IT no longer has to manage individual desktop machines, which each take on unique attributes as users make changes to them over time. Instead IT is managing one copy of each OS and one instance of each application and desktop image, so CIOs can reduce their operational costs. Second, individual users are more productive, because they get a day 1 computing experience every day and also have improved mobility. They can get at all their applications and data from wherever they may be, which means that they can do some work at home after putting the kids to bed or from a hotel room on the road. That can be a huge productivity gain.

How does desktop virtualization help meet user expectations about the "consumerization" of IT?

As you deliver applications on a self-service basis to users, they get control. They can

pick and choose the applications they need in order to do their jobs and add and remove applications on the fly. It's much like the experience of going to Google and choosing the applications you want or downloading music and videos from iTunes. That's the experience that workers, especially the so-called millennials who are now entering the workforce, increasingly expect from corporate IT, because they're so used to it in their everyday lives. Giving that control to users makes them happy.

Consumerization also gets at the idea of freedom of device: enabling users to choose whatever computing device they like. How does desktop virtualization address that issue?

We have a component called Citrix Receiver that enables IT to deliver a solution that's tailored for each device, whether it's a PC, Mac, Windows Mobile device, iPhone, BlackBerry—you name it. Each application feels native to the user's chosen environment, so all the gestures I use on an iPhone, for example, work as expected. If IT can deliver everything as a service but it feels like the default world to the user, that's a beautiful thing.

FOR MORE INFORMATION: please visit <http://www.virtualizationvision.com/cio>



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FROM THE **CEO**

Beyond Goliath

Maybe one day, everything the high-tech industry has to offer your enterprise will come from the likes of IBM, HP, Oracle and Microsoft. But until that day arrives, it's refreshing to see a number of stealth-like vendors delivering some notably innovative solutions for customers.

In my recent travels, I've encountered some vendors who really made me lean forward as they were explaining their solutions. In a world of rampant standardization and consolidation, I found it refreshing to hear from some independent thinkers. Among those worth watching, I would suggest:

Splunk: A killer name with a very interesting solution, Splunk basically leverages search to provide IT management, security and compliance tracking and analysis. They like to say "Google for the Enterprise," but what I found most interesting was how they're building a community for IT pros similar to the model Spiceworks has created. Watch these guys. They are onto something unique.

Actuate: Ever have problems extracting the value of your information assets? Actuate serves up enterprise reporting and performance management applications that are customized around specific business processes. Being that CIOs are always trying to extract more value and insight from data, Actuate has developed an open-source development environment (Eclipse BIRT) that presents data in a richer, more interactive way via the Web or any device.

SonicWall: With security still ranking among the top three IT priorities for CIOs—and the network now the digital nervous system for your business—SonicWall is focused on network security, secure remote access, e-mail security and data protection. Assuming that these are priorities as you strive to keep customer satisfaction high and operational disruptions low, I found it interesting to see how SonicWall is growing beyond the small/midsize company space to address the needs of the enterprise.

As M&A activity keeps accelerating in our industry, it's quickly becoming a "David v. Goliath" landscape. But the market needs all shapes and sizes of vendors to push innovation forward. I find myself cheering for these best-of-breed suppliers with their more targeted solutions.

While these smaller players may seem to be "David" in size, they just might have some "Goliath" solutions to offer.

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Resetting Expectations

Getting a seat at the executive table is common for CIOs, but even those who are there have to learn how to define their role as business strategist



Define what IT does by focusing on competitive advantage, ongoing operations, managing risk and reducing cost

Have IT leaders spend time with business leaders to become well-rounded and increase credibility. Do not have a "We will build it, they will come" attitude, or focus metrics on tactical issues over business outcomes. Report IT costs with reference to business solutions.



Recognize reasoning for project approval

Project prioritization and approval are often informed by whether IT helps make or save money, or does what couldn't be done before.



Overcome "chief implementer" role

To be perceived as a planner, not an implementer, CIOs must learn, understand and anticipate the needs of the business.



Facilitate executive collaboration

As one of the few business leaders who crosses functional silos, CIOs should facilitate meetings among their C-level peers.



Articulate results

Deliver on deadline, measure the results and market the role that the CIO and IT had in making the changes or enhancements happen.

Insights collected from participants at the CIO Perspectives Forums in San Francisco (Sept. 21, 2009) and Washington, D.C. (Oct. 21, 2009). Get more information about CIO Perspectives at www.cio.com/executive-programs or register at council.cio.com/perspectives.

dial
in



The CIO Paradox: Is IT Set Up to Fail?

CIOs run what may well be the toughest function in the business, with end-to-end responsibilities across multiple levels of infrastructure, data management, processes and people. Yet you spend inordinate amounts of time justifying your existence.

This town-hall-style CIO Executive Council forum will address new ideas for IT governance, re-educating CIOs on IT value and enabling the profession to attack and defeat this "CIO Paradox."

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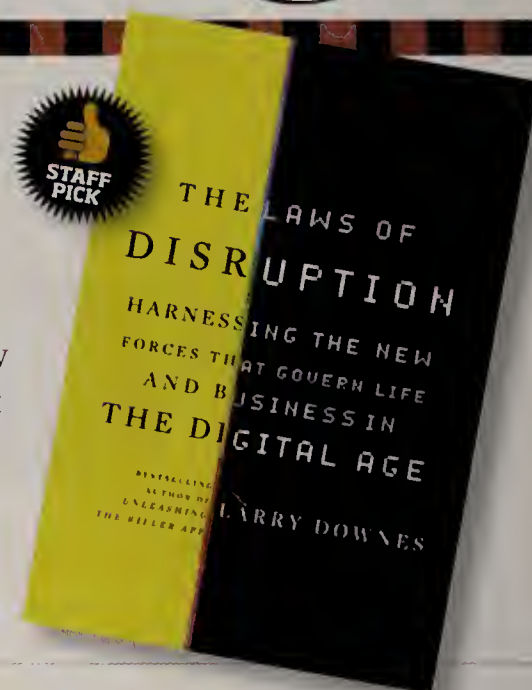
what we're Reading

The Laws of Disruption

Harnessing the New Forces that Govern
Life and Business in the Digital Age

By Larry Downes

Technology evolves faster than social customs and laws. We know that. But what does that mean for your business? Downes lays out evolving business and legal approaches to several issues, including: the value of information; competing platforms and cyber-bullying. Don't rush through this one. *Basic Books*, \$26.95



Winners of the 2009 Forrester Groundswell Awards

By Josh Bernoff

RESEARCH If you don't have time to read Charlene Li's Groundswell about innovative ways to market your company through social networking, here's a taste: NASCAR wins for introducing a new double-file restarts rule at the behest of its socially-networked fans; Lion Brand Yarn created a podcast that in turn launched 'knit-a-longs,' in which fans work on the same project at the same time; and myFICOonline.com cut support calls by 10 percent by creating a community that answered its own questions. www.ciodashboard.com

Ethics Alarms

By Jack Marshall

BLOG Is your team collecting free meals and expensive product samples while helping you make multimillion-dollar decisions about your company's technology? Cozying up to customers in a way your board may later regret? If you've never encountered a major ethics lapse, you're bound to, and if you haven't, you might want to learn ethical reasoning now from Marshall, a trained lawyer who has spent most of his career as an ethicist. He's also an actor who occasionally leads his ethics workshops dressed as the caped "Captain Compliance." In addition to providing a handy rule book, Marshall's blog analyzes all manner of ethical quandaries, from the war in Iraq to public flossing. www.ethicsalarms.com

The CIO Blog

By Peter Birleyr

BLOG This one takes you across the pond, where Birley, who happens to work for a UK law firm, holds forth on issues ranging from project management methodology to how to use technology to win business. In a recent post on social networking, Birley discusses current efforts to link social networking to CRM systems, which would give customer representatives access to every client's social networking profile, posts and networks. Look for December posts on whether the CIO role will still be relevant in five years. www.cioblog.co.uk

The Corporate Culture Survival Guide

By Edgar H. Schein

BOOK Is your corporate culture dysfunctional? Furthermore, do you know the term well enough to recognize problems that truly demand action? Pick up this book for hints on how to analyze office behaviors to decide what works and what will have to be unlearned. Along the way, you'll have to re-examine everything from dress codes to legends about employees present and past. Schein, a fellow at MIT's Sloan Management School lays out his strategy with plenty of Fortune 100 anecdotes. *Jossey-Bass*, \$29.95

Compiled by Joan Indiana Rigdon. Tell us what you're reading. Go to advice.cio.com/blogs/the_techie_reading_list or write to letters@cio.com.

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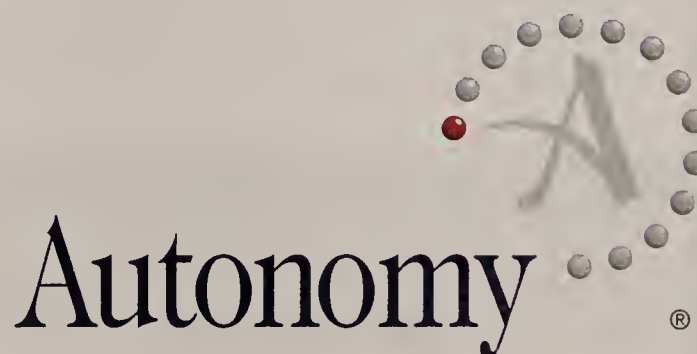
Control the hidden costs of SharePoint with **Autonomy ControlPoint.**

SharePoint is viewed as an inexpensive solution for enterprise-wide collaboration and user-generated content management. Although the initial costs to license and deploy SharePoint may be insignificant, there are many hidden costs that need to be carefully looked at over a multi-year period. For example, SharePoint utilizes SQL Server as its content store which means you're keeping all that data in your most expensive storage system.

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15

Open Up and Say "Online"

At Children's Hospital Boston, sharing more data promises healthier, more satisfied patients **BY KIM S. NASH**

You rarely get a full-circle view of your health records because doctors, hospitals, specialists, pharmacists and insurers track transactions with a combination of software plus paper, and few of those systems talk to each other. It's like having your bank provide separate statements for deposits, withdrawals, transfers and fees, leaving it to you to integrate the data each month. Worse, actually, because most healthcare organizations don't regularly supply customers with much data at all.

Not so Children's Hospital Boston, which created MyChildrens.org, a Web portal where pediatric patients and their families can annotate personal health and treatment records, view billing information, as well as share information among healthcare providers and insurers.

Children's didn't create the portal just to be benevolent, says CIO Daniel Nigrin. The potential for better outcomes, improved customer satisfaction and competitive advantage convinced the hospital to push ahead. Still, changing patient and provider views about how much openness is too much continues to challenge the hospital. Patients hesitate to have their information put online unless ▶▶

ILLUSTRATION BY RYAN SNOOK

..... **↑11%** Black Friday online sales compared to 2008. comScore **↑2.5%** Average salaries in 2010.

Hewitt Associates **72%** Execs who think business expectations have increased due to the economy. McKinsey & Co.

►► **Sharing Data** Continued from Page 15

they're confident it will be well protected. Providers are reluctant to manage yet another communications channel—e-mail with patients.

As in any major business project, changing end user attitudes is more important and usually more difficult than changing technology, says Edmund Billings, a physician and chief medical officer at Medsphere, a consultancy that also offers open-source electronic medical records software. Employees and customers must be educated about privacy and security measures and the appropriate use of the technology with sensitive data, Billings warns.

Better Patient Relationships

MyChildrens.org gives secure access to lab results, background data and insurance and billing history, all of which are refreshed nightly. Patients can also exchange e-mail with their physicians.

"In almost every other aspect of your life, you have pretty good knowledge of what's happening," Nigrin says. "You go to the doctor and he might tell you what he thinks but you don't know in detail about test results and the care plan and the final written opinion." Opening up such information will get people to be more proactive about their health, he predicts. Health care will become more interactive.

The portal—akin to Microsoft's HealthVault and Google Health in that it allows patients to manage their health data—was built by Children's based on open-source software. About 1,100 patients have signed up since the April launch, Nigrin says. Although some doctors feared getting inundated with e-mail, that hasn't happened. Nigrin's ideas about informed interactivity, however, are panning out. Doctors report that patients are asking more questions during in-person visits, which makes treatment more of a collaboration. "That's satisfying for both sides."

Part of what makes the portal successful, Nigrin says, is that it builds on an existing trusted relationship between Children's doctors and patients. For example, the hospital, not an outside vendor, manages and protects all the data. Doctors, not administrators or IT people, introduce the portal to patients.

Right now, the portal technology is novel, like ATMs were in the 1980s. And like ATMs, health portals will become a must-have feature, Nigrin contends. "The organization without one will be viewed as not with the program."

Contact Senior Editor Kim S. Nash at knash@cio.com. Follow her on Twitter: www.twitter.com/knash99.

crunch

Who They Gonna Call?

Technology has improved customer service, but the majority of **consumers still aren't satisfied**. What they want:

Easier/more convenient service	74%
More knowledgeable representatives	67%
Faster service	66%
More options for obtaining service	64%
Special services for good customers	39%



*Respondents could choose multiple answers SOURCE: Accenture 2009 Global Consumer Satisfaction Report

Strategy for Success

Many factors influence project success and failure. But new research suggests that the single most important factor influencing project success is its link to the organization's business strategy.

Conversely, the more tenuous the link between the project and strategy, the more challenges the project will encounter.

Insights Learning and Development and the Project Management Institute came to this conclusion by comparing two different data sets: the number of challenges project managers who participated in a research study cited and the number of project managers who said that their projects have direct strategic value.

"By looking at which groups are having the most challenges and which ones are having the least, it is clear that the connection of projects to strategy is the best determinant of project progress," write Suzanne Dresser and Mark Morgan, authors of a report about the research. "Projects with more challenges were less likely to have clear strategic value."

Strategic value alone is not enough to ensure success. Project managers need to understand the business strategy and how the project supports it.

—Meridith Levinson

..... **60%** Holiday shoppers using social media to find discounts. Deloitte **\$500 million U.S. eBook sales in 2010.** Forrester Research **↓20%** U.S. trade with Canada and Mexico in 2009. Dept. of Transportation



Virtualization and ROI

New research shows that IT executives are getting more than they bargained for. HP explains how it can help.

Ramin Sayar, VICE PRESIDENT OF PRODUCTS,
HP SOFTWARE & SOLUTIONS
Sayar is responsible for product strategy and management for HP operations software, including virtualization and data center transformation initiatives.

New research from IDG Research Services reveals that virtualization has reached a tipping point as it moves from development and test environments to mission-critical production environments. In this interview Ramin Sayar explains how IT executives can maximize their virtualization ROI and prepare for desktop virtualization and the cloud.

Companies are increasingly using virtualization in mission-critical environments and across multiple platforms. What challenges does this create?

The benefits of virtualization—cost savings, efficiencies, and agility—have given

(VMware, Microsoft, Xen) and increasing usage of desktop virtualization. It's no wonder that two-thirds of survey respondents believe virtualization is increasing data center complexity, up 20 percent from last year.

In addition, visibility across virtual and physical environments continues to be a challenge. They can't track end-to-end service levels, provision entire applications centrally or ensure software license, regulatory and policy compliance. For all these reasons, IT leaders are struggling to achieve ROI on their virtualization investments.

can drive efficiency by eliminating silos. The goal is to reduce costs and implement proper controls while ensuring agility is maintained. We believe the siloed way virtualization is being implemented is holding back companies from maximizing their ROI. We advocate an alternative approach: "converged management."

There's also strong correlation between automation and improved ROI. Using automation, for example, to provision or enforce system compliance reduces administrative costs and accelerates adoption.

What's next for virtualization management?

The buzz is all around the private/public cloud and virtualization is correctly viewed as the first step. It's critical to get the virtualization management (people, process, technology) in place because virtualization provides the framework for cloud computing. Getting virtualization management right sets the stage for a sound cloud strategy and greater ROI down the road.

FOR MORE INFORMATION:

Learn more about what IT leaders have to say about virtualization and ROI. Download the white paper "**Virtualization Reaches A Tipping Point**" at www.cio.com/whitepapers/hp_virtualization.

67 percent of CIOs say their data center is more complex due to server virtualization, up from 47 percent last year.

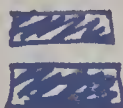
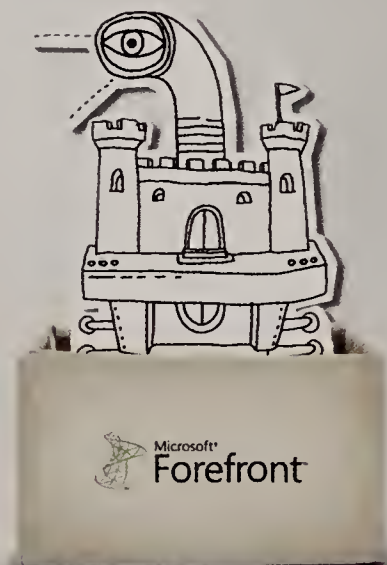
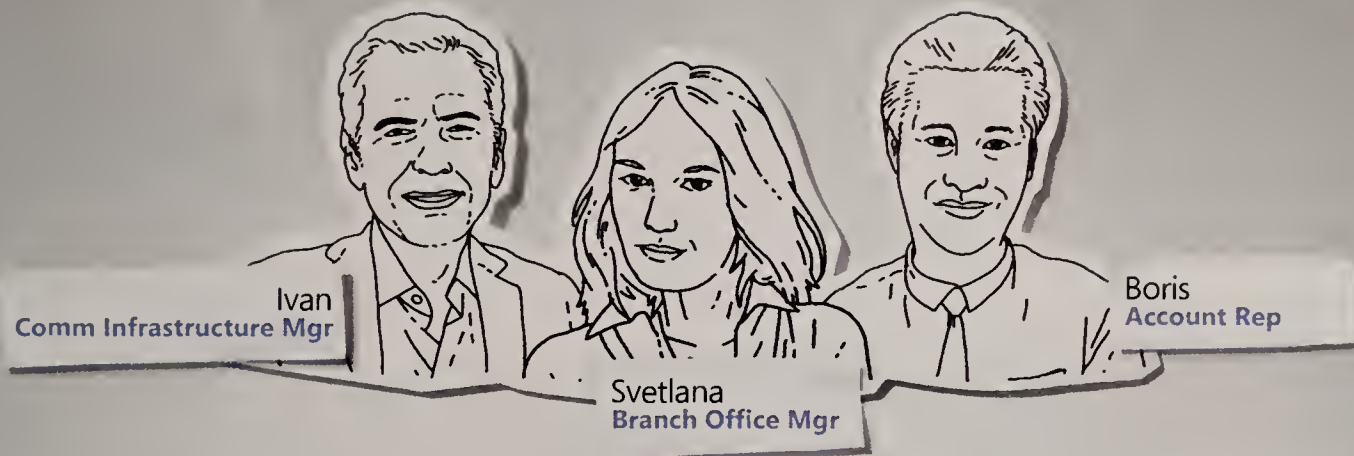
CIOs the incentive to expand their adoption of virtualization beyond test environments into production. But production environments, especially for mission-critical applications, must be managed in a more structured manner. In addition to ensuring availability and performance, IT organizations must consider automation, compliance, and business continuity to ensure success.

There's no doubt that complexity is increasing. We're seeing that the average company typically has 11 different virtualization platforms, spread across servers, storage, networks, and desktops. Customers are adopting multiple hypervisors

According to the survey, IT executives say that on average they've realized only 58 percent of their expected ROI. How can they overcome this hurdle?

The study showed that the top three barriers to strong ROI haven't changed since last year. IT leaders are coping with increased management complexity, managing change across physical and virtual devices, and ensuring high availability. One way to boost ROI is to implement common management tools and processes. This allows virtualization specialists to transition tactical tasks to the operations team, freeing them to focus on virtualization adoption and reducing capital expenses. By centralizing management, IT





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THE **TOP LINE** INTERVIEW :: Clayton Christensen

What CIOs Get Wrong

The professor of business at Harvard and expert on disruptive innovation talks about how new technologies mean big changes for the CIO role and why they still don't get alignment **BY KIM S. NASH**



What about the CIO role do you think is changing?

I don't think we've seen significant enough change. But in the next five years, it will be very dramatic. Interesting disruptions loom, such as cloud computing, Google's Android operating system and mobile telecom.

Cloud computing—any computing over the Internet—just isn't as good as enterprise computing. It's not as secure, not as fast, not as reliable as your internal network.

But like all disruptions, it's getting bigger and better. As it does, it pulls applications, one by one, out of the corporate network into its world. CIOs have to manage that.

In the past, the CIO's role has been deciding what services and what software he is going to make available to the users of his network. As users source more of what they use from the Internet, they will use applications more on an as-needed basis.

The CIO's role must be to help people find what they need on the Inter-

net and create security systems to be sure the corporation is not compromised.

Can't CIOs just block these applications?

Not really. Look at e-mail. E-mail is increasingly done on BlackBerrys rather than on laptops and in airports rather than at the office.

That's just the first manifestation of individuals choosing to use one platform versus another and it's very hard to stop. Others are deciding to use Google Docs, not Microsoft Word.

Should we still be talking about business-IT alignment?

Unfortunately, we're not beyond it yet, but it's a problem with all management, not just CIOs.

Executives conceive of their markets incorrectly.

Most companies developing a new product know they can't make something that does everything for everyone. So they develop a product to target a segment of the market. Forty-five-to 65-year-old males with

college degrees. Middle-income females with kids. CIOs try to define the average need of all the customers—the users—in a particular department. But the average customer doesn't exist.

What should they be doing?

The customer is actually the wrong unit of analysis. It's the job that the customer is trying to accomplish that's the correct unit.

Understanding the job connects your development efforts with what causes the consumer to purchase and the user to adopt. The job is like true north for CIOs.

When you nail a job with your system, competitors have a very hard time copying you.

Every CEO wants to make money for his company. They want to be smart and maybe cool. They want to be Steve Jobs. What do CIOs want to be?

Deep down in my heart, I know CIOs want to make people happy. They want

to make their customers as effective in doing their jobs as they possibly can. When you see them offering technology for technology's sake, or see their customers having to do workarounds because the data doesn't come at them in a way that helps, it's because the CIOs have thought of their world by product category. "We need to upgrade the ERP system." Not "We need to find a new way to coordinate this information to help this person do his job."

I'm surprised to hear CIOs still talking about how they can get a seat at the table. Do they have an inferiority complex?

When CIOs are not pulled by fellow C-level executives to the table, it's because CIOs have framed their mission by product or customer category. Not by this idea of doing jobs well.

Contact Senior Editor Kim S. Nash at knash@cio.com. Follow her on Twitter: www.twitter.com/knash99.



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Managed Services

CIOs Move Toward Managed Services for Critical Benefits.

A recent IDG Research Services survey of CIOs and IT leaders reveals a noticeable trend toward the increased use of managed services, as IT leaders seek improved operational efficiency and IT standardization.

CIOs and other IT leaders are consistently asked to do more with less. And as the economy continues to sputter, they find themselves in the position of having to make tough decisions to cut costs without compromising the quality of IT products and services.

CIOs today realize that to get things done, they often must turn to outside help. In fact, recent research reveals that 69 percent of CIOs and IT leaders see managed services as the solution. And this trend is expected to continue to grow, with respondents saying they plan to shift more work away from in-house resources over the next 12 months.

Critical Benefits

While the economy is pushing CIOs to consistently unearth ways to cut costs, they are also being tasked to gain business advantages through IT efforts. That's why improved operational efficiency and fast implementation are cited as key benefits of using managed services, according to a recent IDG Research Services survey of CIOs and IT leaders.

More specifically, these IT executives say they turn to managed service offerings to offload IT management activities while still maintaining overall control over IT strategy and direction. According to the CIO of a multinational telecommunications service provider who was a respondent to the IDG survey, the key to success here is to strategically identify noncrucial components that can transition into the managed services environment and out of daily IT operation.

Another benefit of managed services, cited by 59 percent of respondents, is standardization. A standardized IT model is generally less expensive—particularly from a capital expenditure standpoint—because there are often fewer IT components to manage. Also, standardization speeds the implementation process and ultimately helps achieve a timely return on investment.

When it is properly aligned with organization needs, embracing a standardized solution enables the organiza-

tion to remain agile and easily react to general shifts in technology, embrace best practices and experience fewer technical issues as part of a broad user community. Other benefits associated with standardized managed services include decreased training costs, lower IT management costs and improved buying power.

Rationalized Trend

According to the survey, more than two-thirds (69 percent) indicated that their companies have managed services in place today—the decision having been driven by a combination of internal resource constraints (67 percent), the desire to reduce costs (61 percent) and the facilitation of standardization (44 percent). And, as CIOs look to the future, there is a noticeable trend of seeking additional external assistance, especially considering the economic landscape.

"There is no question that managed services have enabled us to avoid the costs associated with building and staffing new data centers at a time when the costs of operation continue to escalate," says the telecom CIO. "However, there is often a potential return associated with the service that goes beyond the costs when you truly analyze how the managed services affect the organization. In our situation, managed services add expenses that did not otherwise exist, but they also provide peace of mind through risk mitigation while enabling us to devote more in-house attention to our core components."

As the IDG Research study reveals, CIOs recognize the pressing need to act and are embracing outside assistance to achieve new levels of efficiency, often without additional IT staff. Although the intrinsic motivators differ slightly by organization, the need to continue moving forward is ever-present. For many CIOs, managed services fill the bill.

For further results and insight into this IDG Research Services survey, visit www.cio.com/whitepapers/hpes and download the white paper "Managed Services Use on the Rise."



Control Issues

You don't need a consultant to craft your outsourcing deal.
There are benefits to doing it yourself **BY STEPHANIE OVERBY**

Budgets are tight and as a result, IT leaders are increasingly eschewing the expense of external consultants and tackling everything from requirements gathering to bid analysis on their own.

"Most large organizations have built up outsourcing capabilities over time," says Paul Pinto, managing partner with outsourcing consultancy Sylvan VI. "Now, the need for outsourcing has been pushed down to the mid-market, fostering do-it-yourself outsourcing at companies that don't have the budget to pay for high-priced outsourcing services."

And taking IT services procurement in-house has benefits beyond penny-pinching. "Often you get a simpler, more flexible deal," says Adam Strichman, an independent outsourcing consultant based in Mechanicsville, Va. "More importantly, you take more ownership of what is going on."

Michel Hofman's first foray into do-it-yourself outsourcing happened when building a new IT backbone for London-based Rabobank International's direct banking product launch ▶▶▶



Rabobank International CIO **Michel Hofman** isn't anti-consultant; he finds you can often get a simpler, more flexible deal by taking IT services procurement in-house.

in 2004. He planned to outsource and could have hired advisors, but “they’re always very expensive,” Hofman says. “And they’re not always able to get you to the right decision.” Hofman handled most everything himself from requirements to negotiation and, admittedly, he lucked out a bit. “I had sophisticated and mature sourcing partners that didn’t abuse my lack of understanding,” he says.

The impetus for insourcing the outsourcing process wasn’t cost cutting—though Hofman did save money—but an interest in improving the resulting relationships. Getting intimate with an IT service provider from day one lays the groundwork for a much stronger relationship in a way that working via consultant-surrogates may not, Hofman says.

“Every step of the process—seeing vendors struggling with your requirements, coming back to you with questions—is all part of that relationship building that I found useful, not only during the selection process but also in ongoing management.” Having a greater hand in the procurement process can also build stakeholder consensus for the end result, says Sylvan VI’s Pinto.

Since taking over as CIO for Rabobank’s European operations, Hofman has insisted his staff—who had limited experience selecting or managing IT service providers other than software vendors—sharpen their skills. He hired

some professionals from the vendor community, but mostly they’ve learned by doing.

“Every step in the sourcing process is a way of building that maturity,” Hofman says. His group has gone from no outsourcing to 40 percent of the IT portfolio being delivered from third parties with no help from external advisors.

Hofman isn’t anti-consulting. “A lot of organizations struggle with managing an outsourcing partner,” he says. “They can easily be outsmarted in the contract or beyond.” If his IT organization were larger (his is a 150-person staff with a €50 million budget) or his need for outsourcing greater (he describes outsourcing in his current role as a “tactic,” not a “strategy”), Hofman admits he might have to rely on external experts more. But even then, he’d want consultants to consult, not take over. “Bring them in as a coach rather than someone to drive the process,” says Hofman. “Good consultants have a lot to offer, and they’re worth every penny, but only if you really try to learn from them to better your own organization.”

Strichman agrees DIY outsourcing isn’t for everyone. “In the end you still need skilled people with both the experience and the time to do it. Those requirements are hard to find in the best of times.”

Stephanie Overby is a freelance writer based in Massachusetts.

SOCIAL ENGINEERING

Things You Need to Know

by Robert McMillan

1

SOCIAL ENGINEERING IS GROWING UP. Social engineering, the act of tricking people into giving up sensitive information, is nothing new. Convicted hacker Kevin Mitnick made a name for himself by cold-calling staffers at major U.S. companies and talking them into giving him information. But today’s criminals are having a heyday using e-mail and social networks. A well-written phishing message or virus-laden spam campaign is a cheap, effective way for criminals to get the data they need.

2

TARGETED ATTACKS ARE ON THE RISE. Northrop Grumman recently reported that China was “likely” stealing data from the United States in a “long-term, sophisticated network exploitation campaign.” Security experts have noticed criminals were “spear phishing”—getting Trojan horse programs to run on a victim’s computer by using carefully crafted e-mail messages. Used to steal intellectual property and state secrets, spear phishing is now everywhere.

3

CASTING A BROAD NET PAYS OFF TOO. Less discriminating criminals cast a wider net with their attacks. They pick e-mail subjects everybody’s interested in: a message from the IRS, or even “a photo of you.” The more victims who click links and install the bad guy’s software, the more money the criminals make. Right now, “they’re doing it with messaging that is extremely broad,” says Gary Warner, director of research in computer forensics at the University of Alabama at Birmingham.

4

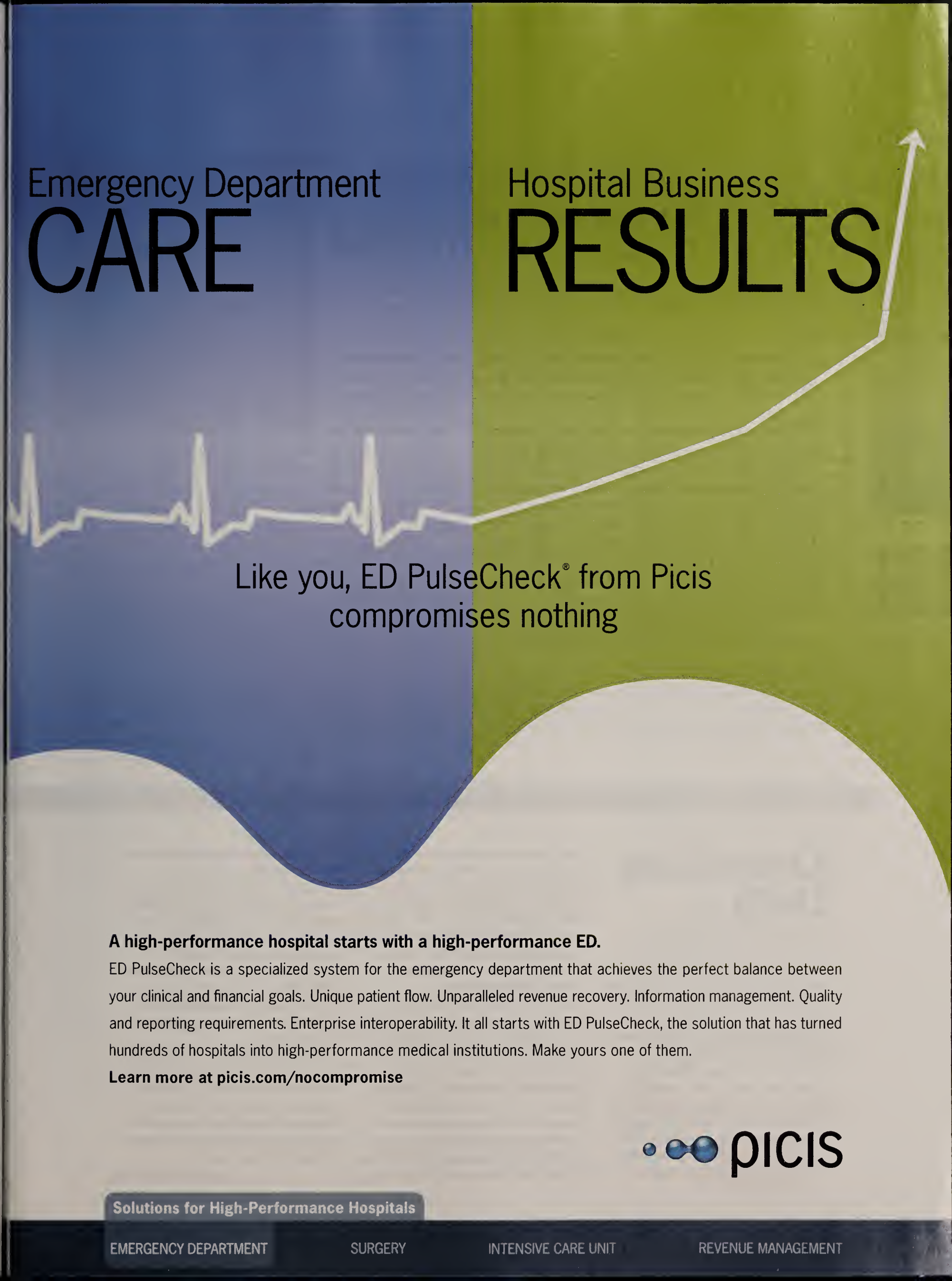
FREE STUFF CAN BE COSTLY. Attackers love to tempt people with freebies, security experts say. “The bait that works best is a popular device,” says Sherri Davidoff, a penetration tester hired to see if she can break into corporate networks. One of Davidoff’s most successful techniques: a fake employee survey. Victims fill it out thinking they’ll qualify to win an iPod if they hand over sensitive information. “Thirty to 35 percent will enter their usernames and passwords to get the iPhone,” she says.

5

PEOPLE TRUST THEIR (HACKED) FRIENDS. That trust allowed the Koobface worm to spread throughout Facebook and led to a rash of direct-message attacks on Twitter too. It’s all part of the next round of socially-engineered attacks, says Steve Santorelli, formerly a Scotland Yard detective and now director of global outreach at Team Cymru. A few years ago hackers were more focused on the quality of their code. Now, he says, “they are putting an equal effort into social engineering.”

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A year of opportunity



The past year has been a tough one for CIOs. You've faced pressures from escalating demand and leaner resources in a challenging global economy. While nobody knows the exact timing or scope that a recovery will take, we do know that it's important to balance the current imperatives around efficiency with a readiness to fully capitalize on the turnaround.

On that note, let me share highlights from *CIO Magazine's* "2010 State of the CIO" survey. This year's results reveal an increasing focus on how CIOs and their IT organizations can support business goals. More than three-quarters of respondents say aligning IT and business goals is the top priority for 2010, followed by controlling IT costs. At the same time, executing on business goals has risen to become one of the top five leadership competencies.

How do you properly balance these multiple priorities? How do you focus on execution to reduce costs and optimize resources, while also investing in the transformational change that will position your company for the next wave of market growth?

The key, I think, is to focus on results. According to a recent survey, the number of CIOs who plan to increase their IT spending is now at the highest point since mid-2008. That's consistent with what I've seen in my own CIO Advisory Board. CIOs are telling us that they do have improved access to capital, provided they can deliver a meaningful, near-term return on the investment.

Our belief is that results begin with a best-in-class, operational focus to enable your organization to self-fund innovation over time. Pragmatic organizations are looking to solutions that produce rapid ROI, but also deliver speed, agility, risk mitigation, and customer insight. Cost optimization, built in part on automating everything from the desktop to the data center, is at center stage. This is what we mean by outcomes that matter—and you'll find specific examples of this over the next few pages.

For you and your organization, the year ahead promises to be an exciting one as IT increasingly becomes a true partner of the business. I wish you all success and growth for 2010 and beyond. If I can be of any assistance to you, please contact me at TomHogan@hp.com.

Warm regards,

A handwritten signature in dark ink, appearing to read 'T. Hogan', written in a cursive style.

Thomas E. Hogan

Executive Vice President
HP Software & Solutions
Hewlett-Packard Company



This year's **State of the CIO survey** reveals that, thanks to the economy, the shift to a strategic, business-focused role for IT leaders is gaining momentum. Despite differences across industries and among different types of CIOs, more of you than ever are focused on seizing commercial opportunities and connecting with customers. See how the CIO role is evolving ...

29

All That It TA



Open the gatefold for
our 2010 Survey results



"New software networks or components used to take us two or three weeks to roll out—now it's one or two days. For small changes in configuration files, it might have been four or five days, and now it takes three hours."

IT Manager

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OUTCOMES

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IDC Business Value Spotlight Sponsored by HP, Using HP Network Automation Availability and Reduce Costs, August 2009

OUTCOMES THAT MATTER

"We've maintained our three nines (99.9 percent) level of infrastructure reliability while reducing our overhead and improving our visibility into processes such as patch deployment. It's been a solid success for us."

Services Architect
MAJOR U.S. TECHNOLOGY COMPANY

APPROACH

As part of a transformation of 85 data centers to three pairs of next-generation sites, consolidate the client management environment using HP Client Automation

OUTCOMES

The company reduced infrastructure by more than 50% while improving reliability to 99.9+, eliminated more than 1,000 infrastructure-connectivity support calls per month, and streamlined file downloading to minimize end-user disruptions.

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The CIO Business Leader

Business Smarts

While strategic thinking, collaboration and change leadership remain the most important leadership skills for CIOs, more of you now put a priority on understanding how to make money.

Most critical leadership competencies	2009	2010
Meeting or beating business goals	18%	30%
Identifying and seizing on commercial opportunities	6%	22%
External customer focus	9%	18%

*Respondents chose multiple answers

Only
30%

of CIOs say expertise in running the IT function is key to their current role—fewer than at any time in the past three years.

How IT Contributes

Although CIOs are still focused on efficiency, applying IT to **improve products** and **connect with customers** has gained importance.

Expected Accomplishments	2009	2010
Improve end-user workforce productivity	49%	63%
Lower company operating costs	39%	58%
Re-engineer core business processes	41%	53%
Improve quality of products and/or processes	35%	53%
Provide innovative new market offerings or business practices	38%	39%
Improve security and risk management	26%	34%
Manage customer relationships	18%	34%
Acquire and retain customers	18%	25%
Support global expansion	23%	19%
Enable regulatory compliance	12%	18%

*Respondents chose up to five answers

IT will have more impact on top-line growth this year

A Role Beyond IT

Nearly two-thirds of CIOs have responsibility for a business area outside of technology. Your focus as an IT leader—on the technology function, on transforming the business or on strategy—influences your portfolio.

Area of Responsibility	TYPE OF CIO		
	Functional	Transformational	Business Strategist
Security	27%	32%	23%
Strategy	11%	29%	34%
Corporate operations	14%	18%	27%
Risk management	14%	18%	12%
Customer service	8%	17%	30%

*Respondents chose all that apply

Your industry also impacts your non-IT roles. Financial services CIOs are most likely to be in charge of security. Customer service falls more often to retail CIOs.

How (and What) You're Doing

Salaries Gone South

IT executive pay peaked right before the economy went bust. Financial services CIOs were among the hardest hit after the crash.

Average salaries				
	'06 ...	\$185,863		
	'07 ...	\$185,240		
	'08 ...	\$237,360		
	'09 ...	\$247,900		
	'10 ...	\$219,300		

Industry	2008	2009	2010
Financial services	\$292,900	\$335,700	\$269,000
Healthcare	\$260,000	\$243,100	\$228,200
Retail	\$262,300	\$252,300	\$227,600
Manufacturing & transportation	\$264,600	\$264,300	\$220,400
Government, education & nonprofit	\$145,300	\$159,900	\$156,900

On the Move Again?

The CIO's average tenure is eight months shorter than it was last year, when the recession was in full swing. Your average tenure in your current post: 4 years, 8 months

YOUR BOSS, YOUR CLOUD

43% of CIOs report to the CEO

70% have a seat on the business executive management committee

Your Top Priorities

- Aligning IT and business goals
- Controlling IT costs
- IT governance and portfolio management
- Business process redesign
- Leadership development/staff training
- Marketing IT's business contribution
- Rationalizing or centralizing the application portfolio
- Protecting customer data privacy
- Scaling IT globally
- Regulatory compliance

Your IT Department

STAFF SHIFTS Staff cuts in the past two years have hit small and midsize IT departments hardest. Increases at large companies pushed the average size of an IT shop to 216. **But 61% of CIOs have fewer than 50 full-time employees.**

Stretched Thin?

IT staff at manufacturing companies support more than twice as many end users as at retailers.

Industry	Number of users per IT employee
Manufacturing	47
Healthcare	41
Government/education	39
Financial services	25
Retail	20

210%

Average percentage of IT labor provided by outsourcers or contract service providers

Your IT Spending

5.70%

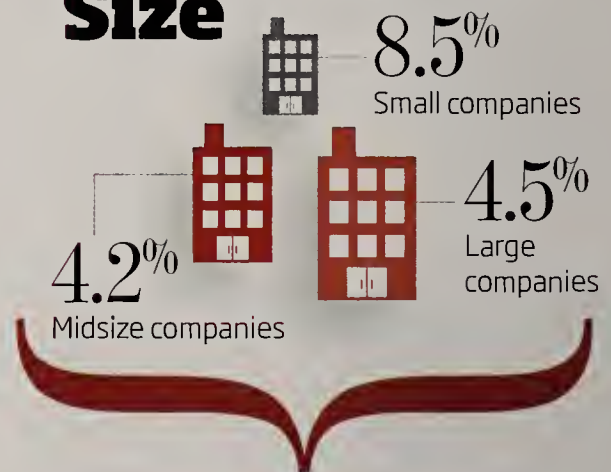
Average IT spending as a percentage of revenue

IT Spending By Industry

Financial services companies still spend relatively more on IT than other nontechnology industries.

Industry	IT budget as % of revenue
Financial services	8.6%
Government/education/nonprofit	5.4%
Healthcare	3.9%
Retail	3.4%
Manufacturing	2.6%

IT Spending By Company Size



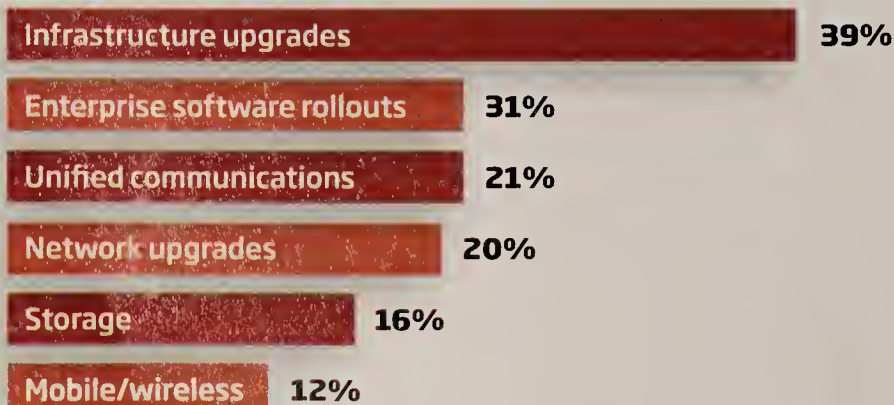
THE BIGGEST SPENDERS:

Business Strategists

Their IT budgets average **7.2%** of revenue—more than transformational CIOs (**5.5%**) or functional IT leaders (**5.1%**)

Projects Delayed

Sixty-two percent of CIOs canceled or put off projects last year because of economic conditions

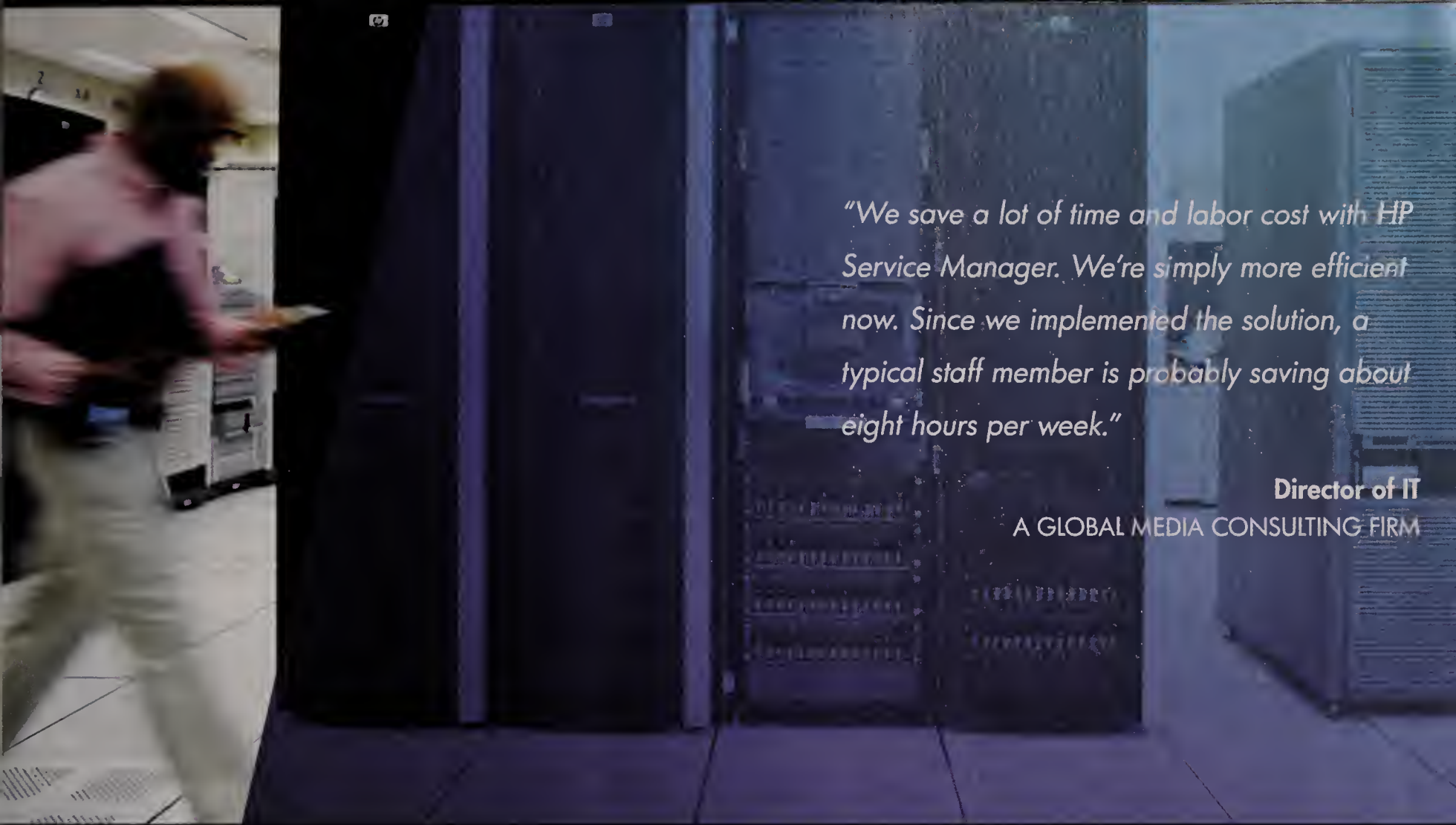


*Respondents could choose multiple answers

SURVEY METHODOLOGY

CIO's ninth annual "State of the CIO" survey was administered online from Sept. 2 through Sept. 14, 2009 to CIO customers in charge of IT at their company or business unit. Findings are based on the responses of 594 heads of IT from a broad range of industries. Twenty-eight percent of respondents were from companies with under \$100 million in annual revenue, 31 percent were from companies with annual revenue of \$100 million-\$999.9 million, and 31 percent were from companies with annual revenue of \$1 billion or more. Sixty-three percent of respondents were from North America.

The margin of error is +/- 4%. Percentages on questions where respondents selected one answer may not sum to 100 due to rounding.

A person in a pink shirt and khaki pants is walking through a server room, carrying a tray. The room is filled with tall server racks.

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At Darden Restaurants, CIO **Patti Reilly White** looks for ways to help customers make the most of their time and personalize their experience.

PHOTO BY PRESTON MACK

Acting on Opportunity

Our annual State of the CIO research reveals a sharper commercial focus as IT reinvents business alignment

39

BY KIM S. NASH

You thought you knew what business-IT alignment was. But fighting the dark forces of recession has really taught the lesson. To some of you, anyway.

At a truly aligned company, all cylinders firing, every executive, every manager, every employee works on one goal: winning customers. In the past, CIOs saw their role as, say, installing business intelligence tools so that the marketing group could analyze customer data. Or upgrading enterprise resource planning software for the supply chain guys to improve order fulfillment. Vital work, of course, but inwardly focused and a few steps removed from living, breathing, money-spending customers.

But now, we find in our 2010 State of the CIO survey, top technology executives increasingly see bringing home the bacon as their job, too.

This year, nearly one third—30 percent—of the 594 IT leaders we polled say meeting or beating business goals is a personal leadership competency critically needed by their organizations, up significantly from the 18 percent who said so last year. Eighteen percent also named “external customer focus” as a critical skill, double last year’s 9 percent. Double.

Meanwhile, 22 percent cited “identifying and seizing on commercial opportunities”—more than triple last year’s 6 percent. Yes, triple.

It’s clear the recession has deepened CIOs’ understanding of and commitment to business beyond IT. CIOs are interacting with customers directly and working side by side with product engineers to build IT into new goods and services. It isn’t every CIO, nor even most of you, but it’s the way the profession is going, says Chris Potts, corporate strategist at Dominic Barrow, a consulting firm in London.

Shifting attention to outside the company will kill the CIO job as we know it, Potts says. “The CIO role is going away from worrying about IT specifically,” Potts says. “It can’t happen too soon.”

Focus on the Top Line

While aligning IT initiatives with business goals continues to be the most frequently cited CIO activity in our survey, fewer CIOs than in previous years place it among the activities taking up most of their time: 64 percent, down from 71 percent last year and 82 percent two years ago. Hilton Sturisky, SVP for information and communication technology with the \$14 billion BCD Travel, thinks that's because progressive CIOs have made such headway in the past few years that they can turn attention elsewhere.

And to where? To customers.

For several years, we've asked CIOs which leadership traits are critical to their personal and company success. Although each year some have said it's important to understand customers and drive revenue, not many CIOs actually made that a priority.

That's changing. It had to. Corporate anxiety about the economy created an atmosphere in which if what you're doing isn't generating revenue, you need to stop it right now. About two-thirds of CIOs, or 62 percent, have canceled or postponed projects during the past year as a result of unfavorable economic conditions, according to the survey. The projects they have focused on are those that can enhance their company's products and spur sales. (For a complete look at the survey results, see "All That Data," Page 29)

"In so many of the products offered now, the differentiating component is the IT capability," says Drew Martin, CIO of Sony Electronics. Certain Sony TVs, for example, can stream movies wirelessly, one of several products and features that Sony's IT group itself helped make possible. CIOs should get their IT departments involved in product development—if IT can truly step up. "You have to have an awareness of where your business is trying to go," he says. "Then you have to make sure you have the capability to support that."

At Konica Minolta USA, the IT group also influences what the company sells, says Nelson Lin, CIO of the U.S. unit that is part of the \$9.7 billion Konica Minolta Holdings in Japan.

For example, Konica Minolta printers, measurement devices and medical tools contain enough computer technology that when they break or get replaced, customers must dispose of them carefully to avoid environmental hazards. Who has been dealing with that very issue since the dawn of the PC era two decades ago? The CIO.

Lin saw end-of-life equipment disposal as a service customers would pay for. Lin and other senior executives view Konica

The Future-State CIO Starts Here

Why an external focus is the right way for IT leaders to stay relevant **BY LOUIE EHRLICH**

The fact that the 2010 State of the CIO survey shows an increased focus on the business's commercial aspects is a great sign for the future of our profession. It's perfectly aligned with what a CIO should be doing and must do more of to stay relevant and valuable.

I believe the economy has played a significant role in increasing our focus in this area. In a typical down period we are asked to reduce IT spending. But this has been such a profound recession that CIOs have been asked to use technology to make the company more efficient overall, including the processes that drive revenue. This has put a spotlight on the critical importance of building and maintaining an understanding of the commercial and customer side of the business.

I hope this shift is more than a reaction to the challenges of the economy; that it becomes a permanent part of our profession's DNA. Many core technologies are becoming utilities. Developments in cloud computing, virtualization and software as a service, for example, are making the CIO role, over time, less about selecting, implementing and running systems and more about strategically enabling business success through information and technology. Meanwhile, IT is becoming more pervasive and critical than ever. There is more competition, broader global integration and the continuous creation of new value chains. The CIO brings a uniquely comprehensive understanding of this complexity. All of these developments point to the CIO shifting from primarily running IT operations toward enabling and influencing business strategies through knowledge of IT capabilities married with an understanding of business needs.

I would like to see our profession build on 2010's increased emphasis on the external and commercial. Let's create a future where CIOs not only can play a strategic external and commercial role but are also called upon by CEOs to do just that. To this end, I will be working with the CIO Executive Council this year to continue to develop the journey toward what we call "The Future-State CIO." Please join us.

Louie Ehrlich is CIO and president of IT at Chevron and a board member of the CIO Executive Council. Read more from the Council in the Connect section, starting on Page 52.

Minolta as an advanced technology company and through that prism, he says, the CIO's input becomes even more valuable. He stepped up to lead discussion of equipment disposal as a money-maker. "I'm doing it for our own e-waste already. It's now a matter of doing this large scale," he says. "It's the right thing to do, everyone knows. But it could be revenue for us, too."

Technology priorities reflect this commercial shift, amplified by the recession. For example, among the projects CIOs canceled or postponed in the past year, most were infrastructure upgrades (39 percent), followed by enterprise software rollouts (31 percent), unified communications (21 percent) and network upgrades (20 percent). Projects that did get funded, on the other hand, included those that improved end-user productivity (63 percent), improved the quality of products (53 percent)



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GONE ARE THE DAYS WHEN CIOs COULD consider the PC portion of their IT infrastructures, at least, to be fairly simple to support. It's getting harder to remember that time, when business populations could be divided neatly into two groups: full-time employees who worked primarily at offices on desktop computers and a smaller set of users who generally worked from afar on laptops.

Today it's a very different world. Businesses are increasingly global, operating on 24 x 7 schedules and reliant on outsourced help almost as much as on full-time workers. The result is an end user mashup of traditional desktop office workers and road warriors, telecommuters who split their time between headquarters and the home office and contract personnel located onsite and offshore. Workers might be using multiple computers—some managed, some not—and their application and data access needs are more complicated.

The growing variety of user scenarios that have been created by new business requirements demands that IT leaders optimize and simplify the desktop infrastructure through virtualization. But desktop virtualization is not a one-for-all solution. Rather, it's a set of technologies aimed at solving the business issues that have been brought on by a more complex client computing infrastructure. CIOs need choice if they are to efficiently and effectively support today's heterogeneous and far-flung client base.

Do you need to confront rising desktop total ownership costs that go hand in hand with having to support a diverse end user population? Do you need to be more agile to respond to new opportunities and developments? In all likelihood, most CIOs probably have to consider both requirements

and deploy the solutions that are appropriate to each scenario.

► SMART STARTING POINT: TCO

With Microsoft's App-V, IT can create a virtual application package for an office productivity suite or line-of-business program enabling two versions of the same application to run simultaneously on the same machine without conflicting. This is a key benefit as many organizations want to phase in new product versions, or require legacy versions remain, due to compatibility issues. The same virtual applications can be streamed on demand from the data center to any client system in the organization and updated as required, without impacting user productivity. Users are able to instantly access the current version of each application they need from whatever device they are working on without having to wait for the application to install. Because they are decoupled from the other computing layers, updates to the virtual application don't affect users' custom settings. There is similar streamlining when user states are virtualized, because they now can be applied to any PC and any application. Workers can log in and obtain copies of their data and customized settings without IT's help. These virtualization technologies also enable the IT department to realize big savings. On average, large companies spend from \$230 to \$1,320 per PC annually just in labor.

Application virtualization removes the management burden, and thus the labor costs, associated with supporting applications locally on PCs in favor of centrally managing application templates and automatically provisioning them to authorized users. Thanks to this technology, Swedish Medical Cen-



ter reported saving more than one million dollars in application deployment and support costs. Since App-V became a part of their work environment, IT staffers at Sinclair Community College in Dayton, Ohio, have gained something very precious: time. "With Microsoft App-V, we literally have saved 100 percent of the time we used to devote to these deployment tasks," says Scott McCollum, director of Information Technology Services. "Now we can use those IT resources for other projects." And, he adds, "using Microsoft App-V solution to deliver software over the network makes it vastly simpler to extend our reach to remote students, while providing on-campus students with much better service."

With user state virtualization—which is built right into the Microsoft Windows 7 operating system—savings are also realized through improved business continuity and continuing user productivity even when disaster strikes.

► NEXT STEPS

With client TCO under control, IT leaders can look to using desktop virtualization as a key part of their efforts to enable a more adaptable enterprise. That's where operating system virtualization comes into play.

Consider, for example, the need to support business-critical Windows XP applications as a company upgrades to Windows 7. Companies can address that requirement by running those legacy applications in a client-hosted Windows XP virtual machine while providing all the other benefits of the new desktop OS to the applications that have been enabled to run under it. That's easily accomplished with Windows 7 Pro's Windows Virtual PC environment and Windows XP virtual machine mode to run those older applications on non-IT-managed client systems. In IT-managed environments, on the other hand, technology departments can use Microsoft's Enterprise

Desktop Virtualization (MED-V) to add policy-based provisioning and centralized management capabilities for virtual Windows XP images.

TÜV Nord, a safety and environmental consulting and testing services provider based in Germany, sees MED-V's usefulness for several requirements. That includes running legacy applications that require an older OS in virtual PC images on desktops running new Windows operating systems. It's simpler and more cost-effective for IT to support older inspection and certification applications this way than it would be to equip employees with two different physical systems, says Frank Boerger, head of client management at the company. "Using MED-V, we can provide users with one physical machine that has separate virtual images for different applications, when needed," he says.

► BOOST BUSINESS FLEXIBILITY

Also consider the need for desktop flexibility when companies have to tap contract employees to meet urgent business requirements. It's likely that those temporary workers will be coming to the job with their own PCs. A solution such as Microsoft Virtual Desktop Infrastructure (VDI) centralizes virtual PCs inside the data center, so users such as contract workers can remotely access the desktop OS, applications and data they need to do the job without potentially compromising the integrity of the IT environment.

A somewhat more cost-effective form of server-based OS virtualization can be found in Windows 2008's incarnation of the venerable Terminal Services. It's now renamed Remote Desktop Services and provides support for RemoteApp functionality for enabling users to share individual applications on a Remote Desktop server.

Neither TCO nor business flexibility will be the outcome of any of these efforts if there's no intelligent plan in place for managing virtual desktop

infrastructures in conjunction with the physical client environment. With Microsoft System Center and the Microsoft Desktop Optimization Pack for Software Assurance, IT professionals get a single pane of glass from which to manage provisioning, performance, reporting and user experience.

► MANAGEMENT IS CRITICAL

RehabCare Group, a Missouri-based provider of rehabilitation program management services, is using System Center Configuration Manager to quickly deliver virtual application packages to 2,500 client computers. System Center gives the company complete visibility into both virtual and traditional software assets. For example, IT at RehabCare can track which computers have been successfully updated with critical applications. System Center's asset tracking capabilities will continue to prove their value as the organization goes ahead with its plans to virtualize the majority of its 150 applications by April 2011, using Microsoft Application Virtualization as part of the Microsoft Desktop Optimization Pack. Since using the technology, RehabCare cut the time for large-scale deployments of new applications from weeks to less than one day, delivered application updates 80 percent faster, improved asset tracking and enhanced reliability and service for widely dispersed employees.

Says Mike Brimberry, lead systems engineer, "Using Microsoft application virtualization and management technologies has had a huge impact. By helping us streamline and strengthen key processes, Microsoft enables us to efficiently handle the needs of a growing business."

Clearly, desktop virtualization offers many benefits for CIOs who approach these more dynamic environments from the standpoint of meeting business requirements.

► To learn more, please visit Microsoft at www.windows.com/MDOP

or helped create new offerings (39 percent).

No doubt the urgent, “all hands on deck” atmosphere triggered some of this shift. But it also comes in part from the evolution of different types of CIOs, our survey finds. The numbers are equalizing among three kinds of CIOs: those focused on IT operations—“keep the lights on” types—those who specialize in large-scale company transformation and those who, removed from the daily fray of running IT, help to set corporate strategy. Last year a clear majority of respondents—52 percent—fell into the transformational category. Thirty percent were operations-oriented and just 18 percent were strategists. This year, the proportion of transformational CIOs dropped to 45 percent and the other two

categories grew: operations-focused IT leaders count for 34 percent and strategists for 21 percent.

While there are still significant differences in how these different types of IT leaders spend their time, the data suggests all CIOs may be shifting toward a more business-focused role. For example, more operational CIOs appear to have divested themselves of one day-to-day responsibility—that of managing security. With only 13 percent citing security as a major activity (compared to 18 percent last year), they’re on a par with transformational CIOs. A handful more operations-focused CIOs are also spending time on leading change efforts, a core activity for transformational leaders. Meanwhile, the percentage of transformational CIOs involved with identifying opportunities for competitive differentiation—a focus for the majority of strategists—grew from 20 percent last year to 24 percent today.

Such evolution comes naturally to CIOs with diverse backgrounds. For example, Denise Coyne, CIO of Chevron’s corporate departments and services companies, was previously CIO of the oil and gas giant’s marketing group as well as manager of 200 Chevron gas stations. She would go to conventions to talk up the company’s point of sale system with gas station operators. “I found out what they wanted,” she says. Her MBA and nine years in marketing have shaped how she approaches IT, she says, assessing projects from finance and business perspectives, for example. (Chevron’s CIO and President of IT Louie Erlich weighs in on why IT leaders must become commercially-focused in “The Future-State CIO Starts Here,” Page 40.)

Patti Reilly White has been with Darden Restaurants for 20 years, 10 of them as CIO. IT has “always” been customer-focused at Darden, she insists, but the past two years have been particularly intense. Projects in development include a system to text customers when their tables are ready, doing away with the flashing-light buzzers restaurant greeters now hand out to waiting diners. “What our guests want is for us to value their time and personalize the experience for them. We in IT try to find ways to do that,” Reilly White says.

Some CIOs even run businesses themselves. In addition to

overseeing internal IT for the \$3.6 billion Nasdaq OMX Group, EVP and CIO Anna Ewing runs Market Technology, a division that sells Nasdaq’s technology to financial exchanges around the world. The unit brought in \$359 million in contracts in 2008, for everything from advisory services (helping customers set up various kinds of exchanges) to trading, clearing and post-trade systems.

“Now that the CEO can pull up our website on his phone, he says, ‘Look, I can’t use this.’ So we have money allocated to development.”

—Matt Rogish, CTO, The J. Peterman Co.

Before coming to Nasdaq in 2000, Ewing didn’t have profit-and-loss responsibility in her previous positions at CIBC World Markets or at Merrill Lynch. But at those companies, she chose a commercial direction as much as she could: at CIBC, she was a founding member of the financial services company’s e-commerce site. Among several positions at Merrill, she led client technology. She was named Nasdaq’s CIO in 2005.

At Nasdaq, Ewing and her team recently launched a free iPhone application for checking stock quotes as a way to experiment with hot new consumer technology and seed the ground for some revenue-generating app in the future. The app debuted on a Friday. By Tuesday, without advertising, the stock-checker was the fifth most downloaded free financial app at Apple’s site. “We wanted to see if the appetite was there,” Ewing says. “It is.” A CIO’s ability to spot new business opportunities comes from thinking like a CEO, she says. “Product development and technology go hand-in-hand.”

Think Like the Customer

Still, most CIOs have no P&L duties. According to our survey, just 9 percent head up a line of business. And although we see impressive jumps in the numbers of IT leaders concentrating on customers, the majority of respondents still don’t spend their time with any. That’s a mistake, says Bill Deam, CIO of Quintiles Transnational, a \$2.7 billion medical research company.

Starting in 2007, most of Quintiles’ top executives, including the COO, the head of corporate development and Deam himself, were assigned one key customer account. Deam says he tries to cultivate good relations with senior managers at his assignment, a \$15 billion biotech and pharmaceuticals firm. Quintiles helps the biotech firm conduct clinical trials for medicines in development.

Deam reviews the account with an executive at the customer company every Friday and visits every six months. He hopes his efforts not only produce closer ties but also more business between the two companies. But that takes time.

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Nelson Lin, CIO of Konica Minolta USA, applies IT expertise to developing revenue-producing services.

performed excellently, without issues,” Deam says. “Then we can go to the next phase of the relationship.” He sees his role as that of an advocate for the customer within Quintiles, asking a lot of questions. How is each clinical trial going? Is quality high? Has anything happened in the past week that needs fixing?

“This is very much about the business side,” he says. For example, Quintiles would like to sell customers on the idea of outsourcing their technology infrastructures, Deam says, and he sees a pivotal role for himself in that strategic sales process. “My job is to make sure senior executives feel comfortable enough to talk to each other.”

Without regular calls and on-site visits with customers, companies can easily make wrong assumptions, he says. Just because a customer places a second order doesn’t mean everything is great. “If all you ever see of the relationship is at that order-fulfillment boundary, you don’t understand how to develop new services.”

Deam and Quintiles’ other “executive sponsors” get together every few months to discuss common issues. They don’t talk about customers’ confidential business, he explains, but about general ideas for how Quintiles can improve. Quintiles’ account team likes the arrangement. They see Deam as an ally who can get things

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done for them internally, he says. "I spent a couple days with them just recently, developing a 2010 plan and budget and new ideas."

Doing sales calls is a relatively simple way for a CIO to learn about customers. The CIO's presence also adds weight to what the salesmen claim. Having a CIO on a sales call isn't uncommon, but it's especially important now, says Sturisky of BCD Travel, when so many products and services rely on IT.

BCD manages travel for big companies whose employees use BCD's web technologies to, for instance, book flights and hotels. Special services, such as tools for analyzing your company's travel data for ways to cut costs, are also available.

When Sturisky went out with BCD's sales team recently, it wasn't so much to contribute but to listen, he says. BCD hasn't yet won the contract; sales cycles are nine to 12 months in the travel services industry, he says. But he thinks his being there made a difference. "There was appreciation that we take a collective approach [to serving customers] and that added credibility to what the sales professionals were saying," he says.

As a result of those conversations, Sturisky is considering how to provide such new services as sending notifications of canceled flights to travelers' smart phones, along with alternative itineraries. Pilot tests are planned for this year, but he's wary of pushing out gee-whiz technology that no one wants. "It's fine to have a differentiator but if it's not keeping customers, what use is it?" he says. To guard against this problem, he will track usage patterns himself, he says; doing so is another way to keep close to customers.

CIOs should also stay involved with any social media experiments their companies may try, Sturisky says, because of the business potential and the big risks. For example, BCD has a relationship with TripIt, a service that broadcasts users' travel

the desire among customers for a mobile version of J. Peterman's e-commerce site.

But he had a hard time last year convincing fellow executives of the need. They were all Blackberry users who, disliking the device's built-in browser, didn't access the Web much from their phones, Rogish says. "It wasn't until I got everyone iPhones that we became organizationally conscious that someone might be visiting our website from a mobile device," he says. "Now that the CEO can pull up our website on his phone, he says, 'Look, I can't use this.' So now we have money allocated to development."

Eyes now open to mobile commerce, iPhone-toting J. Peterman leaders actually have to be reigned in. Specifically, they're hot to offer an iPhone app for e-commerce but Rogish—the CTO!—says the business justification isn't there yet. Apple takes a percentage of the value of each transaction conducted via iPhone applications, he explains, which would eat into J. Peterman's profit too much. "The tug of an iPhone app is undeniable," he says. "But we'll never sell a pair of pants through an iPhone app under Apple's current terms. There would go our margins."

The Guts to Change

In addition to smarts and impeccable logic, it also takes guts for IT leaders to prevent faulty ideas from rising high on the decision tree. Rogish thinks he succeeds by staying up to speed with new technologies but not wasting energy on the latest IT fads. "I've grown up with the Internet. It's not that I'm better or worse than anyone else," he says, "but it's a different kind of mindset."

No matter the generation, though, CIOs who want to focus on external customers may have to deal with internal resistance. The

way to overcome that, says Coyne of Chevron, is to be visible. When she is trying to change how people work, for example, she meets in person as much as possible with colleagues above and below her. At "Dining with Denise" lunches, she talks with lower-level employees about corporate change. At meetings once or twice a year with Chevron's senior-

most executives, she explains the value of IT. In between there are monthly meetings with departments and governance boards. All the while, it's her voice, her face out there. "Blogs, e-mail, town halls, dining. The objective for me is to continuously remind everyone of the bigger picture."

Reilly White, too, is aware of her visibility at Darden and tries to use it as a tool. When restaurant operations crews see IT managers and staff in kitchens and dining rooms, they know Reilly White takes their partnership seriously. If you're not "out there" she says, you risk not understanding what your business needs. **CIO**

A CIO's ability to spot new business opportunities comes from thinking like a CEO. "Product development and technology go hand-in-hand."

—Anna Ewing, CIO, Nasdaq

plans to social sites such as LinkedIn. But privacy concerns mean BCD, which serves many Fortune 500 companies, will go slowly in this realm, he says. "Maybe a CEO doesn't mind publicizing that he's attending an industry conference but doesn't want it getting out that he's going to Brazil next week," he says. Competitive intelligence and personal privacy issues would vary for different BCD customers. "But that's a strategic business question that I as CIO have to be on top of."

Even informal conversations with customers, whether existing or potential, can help solidify technology decisions, says Matt Rogish, CTO at The J. Peterman Co. clothing company. By talking to consumers, friends and family—as well as living life as a 29-year-old who grew up with technology—he had spotted

Contact Senior Editor Kim S. Nash at knash@cio.com. Follow her on Twitter: www.twitter.com/knash99.

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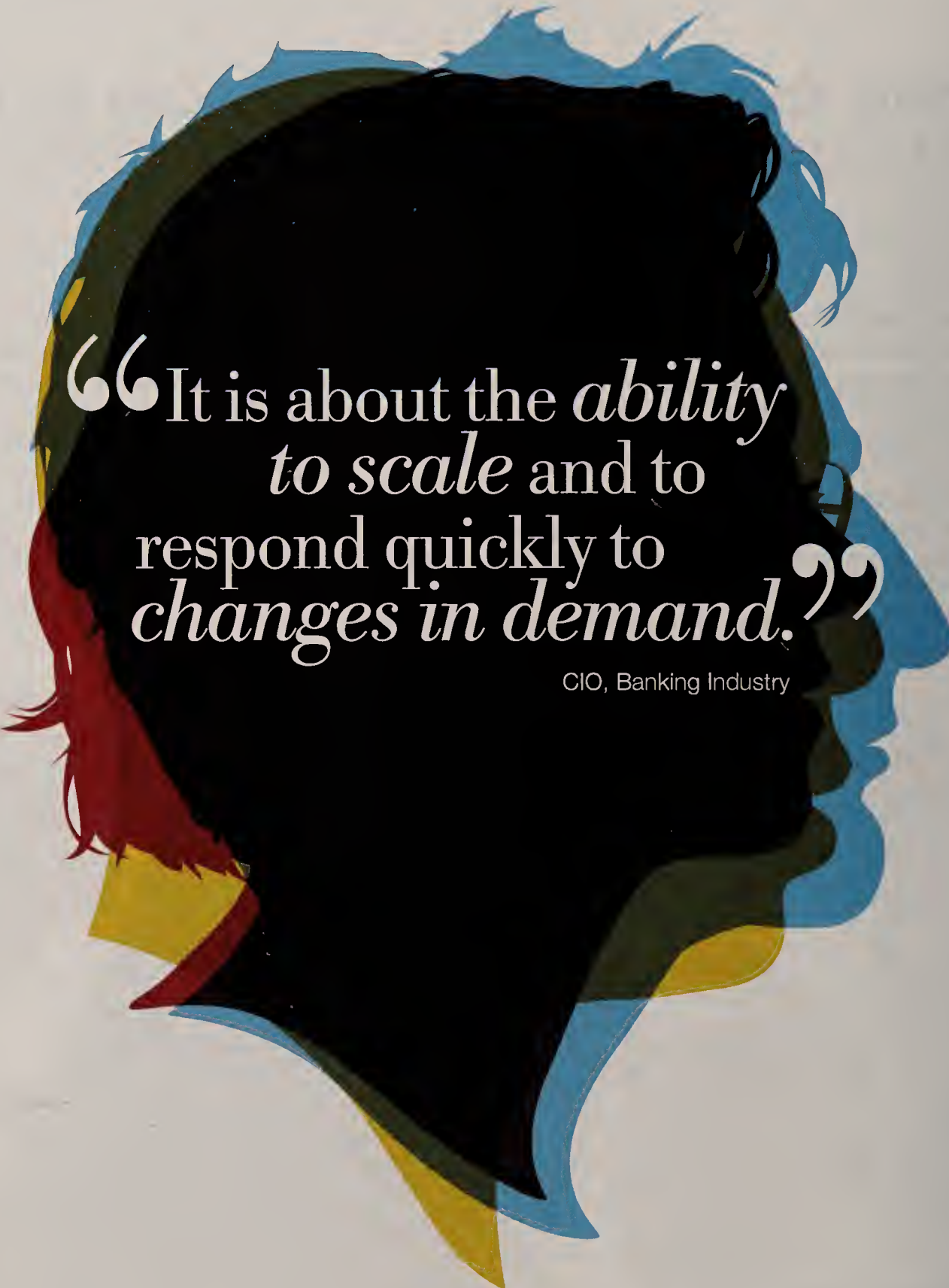
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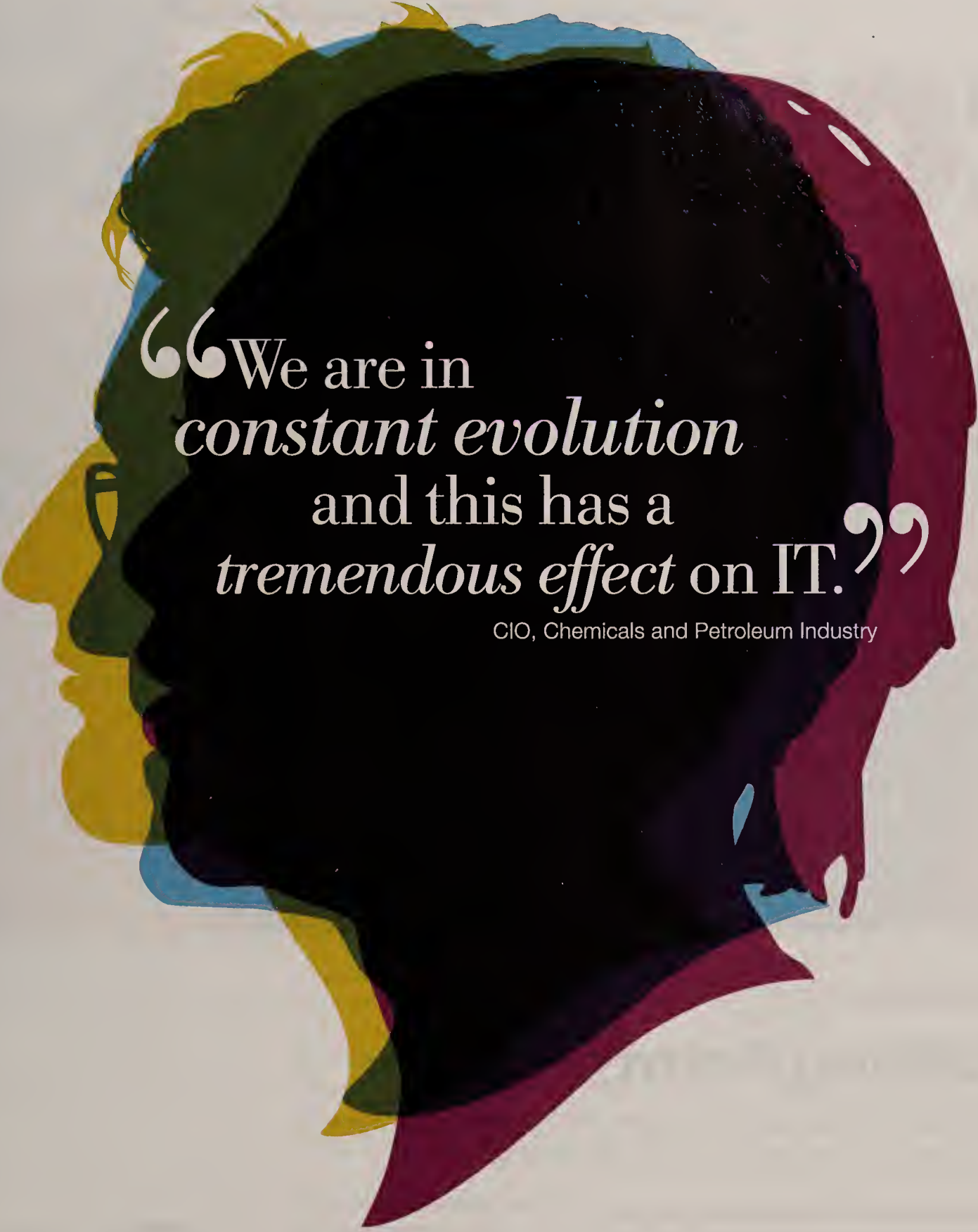
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Talking Points

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WILLIAM BLAUSEY, EATON CORPORATION

QUANTIFY YOUR OPERATIONAL CONTRIBUTION

IT's biggest contribution comes not through keeping technology running or cutting maintenance costs, but in having an impact on the company's overall financial and performance objectives. In order to keep that at the forefront of the minds of every part of the business, we have incorporated into our IT strategy the concept of "operational contribution," a metric that is officially shared in Eaton's post-project audit process. As part of the evaluation, my staff works with our functional and operational partners on the project to achieve an agreement on IT's role in—or contribution to—the results, including working capital reduction, sales growth and the reduction of expenses outside of IT. In a recent legal project, we thought that our contribution would be \$750,000 in savings through expense management, but it turned out that we were able to ►►►

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William Blausey, Senior VP and CIO, Eaton Corporation



Annabelle Bexiga, CIO, Bain Capital



Jane Moran, CIO, Markets Division, Thomson Reuters

ILLUSTRATION BY GORDON STUDER; THE ISPO



Identity Fraud Rising:

Today's Tough Economy Calls
for Tough Access Control

Grant Evans, CHIEF EXECUTIVE OFFICER AND CHAIRMAN OF THE BOARD OF DIRECTORS, ACTIVIDENTITY CORPORATION

Grant Evans is a 22-year veteran of the identity security market with experience ranging from startups to multi-hundred million dollar companies.

A turbulent economy brings many security challenges—from increased identity fraud and insider threats to heightened oversight. CEO Grant Evans of Fremont, Calif.-based ActivIdentity, shares his thoughts on the growing need for strong authentication and credential management.

How has the financial crisis and recession impacted identity fraud?

All forms of identity fraud have risen dramatically. One analyst estimates online identity theft in the U.S. has jumped from 37 percent to 68 percent. Historically, U.S. financial institutions have mitigated fraud risk by relying on insurance policies and offered consumers reimbursements rather than deploy strong authentication technology. That lack of access control gives hackers and identity thieves the perfect environment for their crimes. Now, though, many financial organizations are implementing strong authentication methods to address fraud loss, strengthen compliance, and to gain competitive advantage.

What else do CSOs need to think about in a challenging economy?

There are two other issues that point to the need for strong authentication and credential management systems. First, in conjunction with a credential management system, strong authentication can protect the organization against dangerous insider threats—namely disgruntled ex-employees—during a time when massive layoffs seem to occur daily. Second, with increasing oversight, strong authenti-

cation allows you to define, track, monitor, and report on who has access to what and when; thus reducing the time and cost associated with audit compliance.

Has ActivIdentity's approach to new technology offerings changed as a result of the economy?

Yes it has. Given today's cost pressures, ActivIdentity is pursuing strategies that enable organizations to more affordably thwart security threats and identity fraud. We are partnering with managed service providers that will offer our security solutions to enable strong authentication and credential management services "in the cloud." We are also taking advantage of mobile phones as authentication devices—instead of issuing badges—to provide greater user convenience and jump-start security initiatives with a lower TCO.

What role does regulation play in strong authentication?

Regulatory compliance is a major driver in the adoption of strong authentication across many industries. For example, with legislation like the Homeland Security Presidential Directive 12, strong authentication and credential management systems allow government agencies to issue, use and manage Personal Identity Verification (PIV) cards in compliance with the FIPS 201 standard. Similarly, many large enterprises take advantage of strong authentication to document access to sensitive data or applications for compliance with the Sarbanes-Oxley Act.

How are you safeguarding your own company from identity fraud?

We deploy our own solutions to secure our IT infrastructure and adhere to best practices for identity and access management. Our employees wear badges that contain their personal information and identity-based access credentials in a smart card chip. Those badges are used to open doors, log into computers, and access the VPN environment and business applications—all of which helps us defend against security threats and identity fraud.

What advice would you give CSOs as they contemplate their identity challenges?

When it comes to implementing strong authentication and a credential management system, CSOs should consider the following: First, evaluate and select authentication methods that are most appropriate for one or more use cases across different user communities. Second, be sure to think about future use cases and user communities. Finally, migrate toward a broad-portfolio vendor that provides a single authentication infrastructure while supporting all necessary methods.

FOR MORE INFORMATION:

Check out the white paper "Understanding Versatile Authentication and Its Benefits" at www.cio.com/whitepapers/actividentity

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►►► **Value** Continued from Page 52

quantify our contribution at more than \$2 million per year through process improvements that we helped develop.

At a higher level within the company are the portfolio management review meetings, where my executive peers and my IT leadership not only go over what is in the hopper for the coming year, but take a look back on recent major initiatives. As with every other communication of IT's value, these review discussions are with the functional sponsors of the projects. No matter who we are speaking to, we truly have to demonstrate our value as a member of a partnership; saying that IT unilaterally did "X" will just cause friction, and no one will believe you, anyway.

ANNABELLE BEXIGA, BAIN CAPITAL
GET YOUR TEAM TALKING BUSINESS

Explaining IT's impact on operations isn't only the responsibility of the CIO. Everyone on your IT staff has to talk in terms that company leaders will understand and appreciate. To drill in that way of thinking, you have to make it part of the discussion at every level. This takes time; you can't get discouraged if the message doesn't get through to your staff immediately. I started by bringing in business-aligned managers to explain to my team exactly what the business lines do and how they do it—just as IT can be seen by other functions as a black box, often the business seems a lot more mysterious to IT staff than it really is, which prevents them from reaching out with questions or speaking up with ideas.

I also shifted the reports at our town hall meetings from technical project descriptions to outlining business-line operational impact. Reports from our IT managers are now focused on changes in business processes and applications and how IT helped make those changes happen. My direct reports who are responsible for the IT of an entire business line are now functioning as true partners who fully embrace investment and development by process, regardless of the applications involved. That keeps IT's role in delivering value at the top of everyone's minds.

JANE MORAN, MARKETS DIVISION, THOMSON REUTERS
BE CO-DRIVERS OF BUSINESS STRATEGY

The merger of Thomson Financial and Reuters IT into my organization brought together thousands of application users across a newly-expanded range of functions. In this environment, it was more essential than ever to work closely with my executive counterparts in sales and customer services. We established joint steering committees to determine business strategy for all of the function lines, work together on business cases for projects, create joint roadmaps and ensure that we are having the same business-focused discussions no matter where we are in the company. I have pushed my people to become active participants in this partnership, not just bodies sitting in the room, because the primary mechanism for communicating our value has to be that daily interaction; people understand value they experience.

To communicate with the rest of Thomson Reuters, I take full advantage of the corporate philosophy that to really influence change in the organization, you need to have common processes supported and enhanced by technology. All communication about goals from the top reflects this, ensuring that even people or groups who haven't worked with my office understand what we bring to the table for the company.

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Develop Your External Leadership Skills

What: A collection of essays from CIO Executive Council members on understanding and developing the external-facing leadership competencies of "customer focus," "commercial orientation" and "market knowledge."



Why: Of the executive leadership competencies that are considered core to C-level executive success, the ones that CIOs typically have the least experience with—and therefore the weakest development—are those that are externally focused. These competencies are also those most critical to becoming a Future-State CIO, which the CIO Executive Council defines as an IT leader who spends a larger proportion of his or her time driving and enabling business strategy, versus being primarily focused on running the IT function and enabling process transformation. In the current State of the CIO survey, external customer focus and identifying and seizing on commercial opportunities grew significantly in importance to CIOs in their roles for the coming year (see "Acting on Opportunity," Page 38). This collection of essays by Council member CIOs and executive talent assessment firm Egon Zehnder International explains and illustrates the three external competencies in action. It also provides peer-to-peer insight on how to acquire knowledge and develop personal strengths in these areas and cultivate them in your IT organization.

How: CIOs from Best Buy, Universal Orlando Resort, Direct Energy and others describe how they have learned to anticipate customer needs, become market savvy and identify and enable commercial opportunities. Egon Zehnder partners define and describe associated high-performance behaviors.



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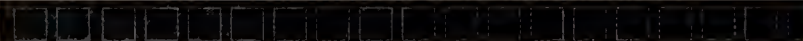
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Inherent Contradictions

Time to fight back against paradoxes that set up IT to fail **BY MARTHA HELLER**

Ten years ago, I started asking CIOs a question: When you walked into your job, what did you find? The answer, roughly 90 percent of the time: "I inherited a mess. The IT organization had major delivery problems and no credibility with the business." A decade later, I am getting the same answer. How can this be? Is every CIO I have ever spoken to an idiot? Or, more plausibly, is there something so inherently problematic about the CIO role that even the most talented and experienced leaders have trouble making it work?

Few would argue that your role suffers from inherent contradictions: business acumen versus technology skills, operational fixation versus strategic ambitions, innovation versus cost containment, enterprise responsibility versus siloed demands, and ultimately, accountability versus disempowerment. These contradictions form a "CIO paradox" that is deeply embedded in governance, staffing models, executive expectations, budgeting, even the titles that IT leaders hold.

The CIO paradox can be as profound as this: Bad technology can bring a company to its knees, yet corporate boards rarely employ CIOs as directors. It can be as pragmatic as the perennial conflict between risk mitigation and product innovation. Certainly it will take more than one column to tease out these elements and tap CIOs on how to attack, reverse or neutralize them. Watch this space over the coming year as I join forces with the CIO Executive Council and broader leadership community to help fight back against the CIO paradox and level the playing field for IT success and the positive evolution of the CIO role.

For now, I offer one element of the CIO paradox and an intriguing way to overcome it.

Move beyond enablement

Scott McKay, CIO of Genworth Financial, describes the paradox this way: "Many CIOs see their role as an enabler to their

business peers," he says. "But precisely because they are enabling business results, rather than driving them, they are not perceived as highly strategic to the management team."

In fact, many CIOs regularly proclaim with great pride that they have no "IT" projects at all, only "business" projects. "The traditional CIO education includes a number of IT governance practices that instruct the CIO not to champion any initiatives and to always have a business sponsor," says McKay. "But unless CIOs get comfortable stepping beyond those traditional IT governance paradigms and take leadership of business initiatives, they will never have as much impact as a sales leader with accountability for a new product."

Specifically, McKay says CIOs should step out of the enablement shadows and become the competitive capabilities expert. "Generally, a business needs only a few differentiating capabilities to be competitive," says McKay. "With his or her access to processes and data, the CIO has the unique ability to baseline business capabilities and to identify

which of these need to outperform the competition." If CIOs can harness this powerful data and process perspective to become their company's competitive capabilities expert, they will be better positioned to drive strategy. "This is an incredible opportunity for CIOs," says McKay. "Some will take it and some won't."

Over the years, we've called it many things: demonstrating IT value, business and IT alignment, and we've probably used a few phrases not appropriate for print. This year, let's call it the CIO paradox. But whatever we call it, it's hurting our enterprises, holding back our teams and threatening the Future-State CIO (see "The Future-State CIO Starts Here," Page 40). If we are ever going to move past it, we need to get started.

Martha Heller is managing director of the IT Leadership Practice at ZRG Partners, an executive recruiting firm, and a cofounder of the CIO Executive Council. She can be reached at mheller@zrgpartners.com.

**Your role
suffers from
contradictions
deeply embedded
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Survive vs. Thrive: The CIO Dilemma

Dell helps CIOs drive business value

The decisions of CIOs today are high on the business agenda as they prepare their companies for post-slump growth while continuing major cost reductions. Steve Schuckenbrock says he believes that CIOs can seize the economic downturn to drive stronger alignment of business functions and help embed efficiencies for their companies.

How are CIOs positioned today?

The role of the CIO is stronger and more important than ever. The problem is the bar of expectations gets raised at the speed of technology. CIOs have to play an increasing leadership role in aligning business functions. They have the ability and responsibility to see the cross-functional connection points within the company and with partners, whether customers or the supply chain. That said, CIOs must change the perception of the IT organization from a cost center to a primary driver of business value. Part of this perception shift is driving the understanding that standardization and simplification of the underlying IT architectures are keys to driving optimal balance of speed and flexibility for the business, and also a great cost execution.

What dilemmas do CIOs face today?

Many CIOs spend 80 percent or more of their budget on just "keeping the lights on." This simply isn't sustainable if the end goal is innovation. Without a reallocation of critical IT dollars to strategic initiatives—meaning reducing day-to-day running costs down to 50 percent or less—companies will be stuck in today's execution patterns.

Dell has addressed this dilemma internally by implementing technologies that have a profound impact on the business. We've simplified, standardized and automated our infrastructure to drive efficiencies throughout. One example is virtualization. The impact virtualization has had on our business has been phenomenal. We've already eliminated 6,000 servers and virtualized 7,000 others, with

the goal of reaching 10,000 servers by the end of 2010. The result is a savings of well over \$100 million during the course of two years—that is \$100 million we are able to reinvest in innovation and product development.

This result alone highlights the impact that CIOs and technology can have on a company's business, and virtualization is really just the tip of the iceberg.

What do you see for the future?

The future looks exciting. We're going to see distinct improvements in enterprise efficiency. New compute paradigms like the cloud, fully virtualized infrastructure, modular services and continued innovations with mobilization through always-on performance all hold great promise. Every CIO will have to navigate these dynamic changes to meet the increasing demands and expectations of the business teams.

How can Dell help?

We're helping to drive standardization and simplification into action with our customers. We have a philosophy of delivering targeted high-impact projects without the trappings of expensive consultants.

One example is our work with customers to accelerate the move from high-cost proprietary systems and mission-critical applications like ERP onto open-architected x86 solutions with Intel® Xeon® processors. These migration services quickly provide CIOs with proof-points to the broader business on how technology can speed flexibility.

Another is leveraging remote infrastructure management and cloud-based software to automate costly tasks like patch management, license management, email archiving, and continuity. These products and services, along with many others, enable customers to maximize uptime, costs, and flexibility. Driving innovation through open architecture assures the best value for our customers.



Winning With Fundamentals

Whirlpool CIO **Kevin Summers** on leading your team to recovery



What is the key lesson we should take away from this recession?

I have been through three downturns in addition to our current recession; the first at GE, then at AT&T and Coca-Cola. What I'm doing today as CIO at Whirlpool is exactly the same thing I did in those situations. That is, achieving sustainable cost reduction by focusing on fundamentals. Companies that are struggling the most to recover lack a clearly defined strategy that included cost optimization. Hence, when the need to reduce expenses hit, they were forced to reactively rip out costs.

When I arrived in 2007, the fundamentals weren't in place to provide a solid foundation. Our spending was up to 20 percent higher than

needed, we had far too many suppliers and few of the projects we were working hard to implement were strategically aligned to business direction or delivering the highest ROI. We needed solid financial management and governance processes to improve. This downturn gave urgency to our goal of achieving sustainable cost takeout in IT, which helped to accelerate our overall strategy.

We've spent two years building the IT organization's operational routines and capabilities such as portfolio, program and financial management and globally integrating the organization. With portfolio management and governance, we whittled down hun-

dreds of projects to 20 to 30 strategic programs aligned with the business. Through our strategic partnerships with IBM, AT&T and others, we increased our capacity and scalability. This has added up to more than 28 percent in annual cost reductions.

We're still investing in the IT organization. We are selectively hiring and have continued professional development, including performance management, career development and more new technology training than we have had in the past. When the economy improves, people will remember that we've invested in them during the down times.

We haven't stopped

investing in innovation, either. Part of our strategy road map is to support the return of growth. We are implementing platforms that provide an integrated supply chain and that allow us to manage consumer needs through a comprehensive online strategy.

When the economy rebounds, the companies that will win are the ones that have a foundation that enables sustainable cost takeout, that continue to focus on customer loyalty and that have a road map that supports business value creation.

Kevin Summers is corporate VP and global CIO at Whirlpool, and he is a member of the CIO Executive Council.



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COMPANY INDEX

Accenture 16
Actuate Corp. 8
Apple Inc. 48
AT&T Intellectual Property 60
Bain Capital LLC 54
BCD Travel 40
Calpont Corp. 26
Chevron Corp. 4, 40, 44
Children's Hospital Boston 15
CIBC World Markets Inc. 44
Coca-Cola Co., The 60
Darden Concepts Inc. 44
Dominic Barrow Services Ltd. 39
Eaton Corp. 52
Facebook 24
Forrester Research Inc. 4
Gartner Inc. 4
General Electric Co. 60
Genworth Financial Inc. 56
Google 4, 8, 20
Greenplum 26
Hewlett-Packard Development Co. 18, 8
IBM Corp. 60, 8
IDC 26
Insights 16
K&L Gates LLP 26

Konica Minolta Holdings Inc. 40
Merrill Lynch & Co. Inc. 44
Microsoft Corp. 4, 8, 16, 20
MIT Sloan School of Management 12
Monash Research 26
Mt. Bachelor 64
NASCAR 12
NASDAQ 4, 44
Northrop Grumman 24
Oracle 8
Project Management Institute Inc. 16
Quintiles Transnational Corp. 44
Rabobank 23
Rolls-Royce Motor Cars 18
SonicWALL Inc. 8
Sony Corp. of America 40, 4
Splunk Inc. 8
Sylvan VI 23
Team Cymru Inc. 24
The J. Peterman Co. 48
Thomson Reuters 54
Whirlpool Corp. 60
Z Resource Group Inc. 56

ADVERTISER INDEX

ActivIdentity Corp. 53
AT&T C3

Autonomy 13
Blue Coat Systems 2
BMC Software 61
Citrix Systems Inc. 6, 41
Dell 58
Hewlett-Packard Co. C4, 17, 28, 30, 35, 37
Hitachi 9
HP Enterprise Services 22
IBM Corp. 50
Informatica 27
InterSystems Corp. (regional) 55
Iowa Dept. of Economic Development (regional) 57
Juniper Networks Inc. 11
Microsoft Corp. 19, 42
NetApp 45
NTT 49
PhoneFactor 14
Pics Inc. (regional) 25
Qwest Communications 5
Reliance Globalcom 21
ShoreTel Inc. C2
Tibco 63
Verint Systems Inc. 47



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64



Trail Blazing

Oregon's Mt. Bachelor Ski Resort heads into this ski and snowboard season armed with a variety of digital improvements implemented last summer. For the first time in 14 years, the resort, located in Bend, redesigned its ski area trail map to be "completely to scale and far more accurate" than ever before, says Marketing Director Alex Kaufman. This new rendering represents a trend in the ski industry, as new technologies transform trail maps from "works of art" to "digitally designed images."

Appearing as a cross between a relief map and a high-resolution image, Mt. Bachelor's trail map uses high-resolution satellite imagery and elevation data to eliminate a map insert and provide a 3-D look that captures more terrain—showing the west side of the mountain (the biggest, longest part) in the same fashion as the front side. As an added benefit, the resort plans to launch an online 360-degree rotational view of the map that skiers can check out before they hit the slopes this season. —Simone Levien

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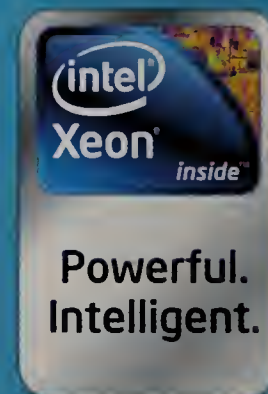
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Next generation HP ProLiant servers. 11:1 consolidation and rapid ROI.

- Achieve 95% reduction in energy and cooling costs
- Realize savings of up to 90% in software license fees
- Reduce the number of servers to manage by 90%

Technology for better business outcomes.



HP ProLiant DL380 G6 server

- Up to two Intel® Xeon® Processor 5500 Series
- 144 GB maximum memory footprint
- Now supports up to 8 small form factor high-performance SAS hard drives or up to 6 large form factor SATA hard drives
- HP Insight Control cuts management costs by up to \$48K per 100 users over 3 years* with integrated management suite

\$2,099 (Save \$725)

Lease for just \$55/mo.**

SmartBuy (PN:470065-153)

See how HP innovation is delivering radical ROI for companies like yours at hp.com/go/servers/roi3 or call 1-866-356-6091.



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